Madurai Crown Record

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Madurai Crown Records

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Ref No. 58

20th November 1885, No. 1299, Revenue.

1145

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Season Reports for the Week ending 14th November 1885.

Read—the following Telegram from Collector of Ganjam, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 13·12, ragi 26·77, cholum 21·83, cumbu 31·4. Rainfall—Berhampore 0·04, Goomsur 0·85, Parlákimedi 0·05, Calingapatam 0·1, Udayagiri 0·1; week before last rain Suradá 0·8; three rain-gauges removed; none yet restored. Cholera deaths 58; cattle-disease (cowpox) in Berhampore, Sómpet and Narsannapet taluks; number of deaths not reported. Light paddy ready for the sickle; other irrigated paddy gently thriving.

Read—the following Telegram from Collector of Vizagapatam, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 12·8, cholum 20·1, ragi 28·1, cumbu 29·4. Small-pox five taluks; fever six; cattle-disease in Pálkonda taluk, 3 deaths; particulars asked in official memorandum, No. 688, will be given from next week. In Anakápalle, Párvatipur, Pálkonda, Vizianagrum crops good; in Golgonda, Sarvasiddhi, Vizagapatam paddy suffering from blight; elsewhere standing crops fair; ragi harvested two taluks, outturn half; ulundu one taluk, outturn five-eighths; cholum sown in Sarvasiddhi; horse-gram, tobacco Pálkonda; ragi in Bimlipatam, Bobbili; tobacco transplanted in Viravilli taluk. Water-supply sufficient. Rainfall above average by 1·4 inches; Anakápalle 0·52, Balacheruvu 1·75, Bimlipatam 1·0, Chípurupalle 0·1, Kuppili 0·2, Narsapatnam 3·5, Párvatipur 1·0, Sálúr 2·0, Viravilli 1·2, Vizianagrum 0·1, Waltair 0·05, Yellamanchili 1·95, Koraput 0·6, Rayaghada 1·0; no rain one station; gauges from Bobbili, Gajapatinagar, Gúdem, Srungavarupukóta, Kotipad, Malkangiri, Naurangapur withdrawn 1st April; Paderu, Pottungi, 8th April; Gunipur, 17th March.

Read—the following Telegram from Collector of Godávari, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 14·27, cholum 26·25, ragi 31·0, cumbu 32·20. Fever and small-pox slight; cholera 118 deaths five taluks; no cattle-disease. Standing crops generally good; rasangi paddy being harvested, outturn $\frac{3}{4}$; paddy approaching maturity; fields being ploughed for transplantation of tobacco. Godávari water 8·60 feet above lock-sill. Rainfall—Cocanada 0·70, Ellore 0·65, Peddápuram 1·0, Pentapadu 1·40, Pithápuram 3·10, Polavaram 1·70, Rahitapuram 0·60, Rajahmundry 0·60, Yernagúdem 0·90, Bhadráchalam 0·95, Kottapeta 4·60; rainfall to date is above average; Alamúr, Kottapeta withdrawn 2nd and 26th April, respectively; not restored; approximate measurement reported.

Read—the following Telegram from Collector of Kistna, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 12·79, cholum 21·01, ragi 27·16, cumbu 22·78. Rainfall—0·65 Répalle, 0·51 Bápatla, 0·2 Guntúr, 1·0 Dáchepalle, 0·93 Gudiváda, 1·6 Krósúr, 3·05 Vinukonda, 2·54 last week, 0·1 Gannavaram; *nil* elsewhere; rainfall 1st January to date 29·64 against average last three years 34·63; rain-gauges restored Narsaraopet 6th, Krósúr 7th, Tiruvur 14th instant. Varagu, tobacco, pulses sown; standing crops generally fair; cholum damaged by rains in Guntúr, Sattenapalle taluks, and Núzvíd division, and varagu in Palnád; dry paddy, cumbu, cholum harvested in parts, outturn $\frac{1}{4}$ to $\frac{3}{4}$. Fever, small-pox and guinea-worm in places; cholera prevailed in Palnád, Bandar and Bezváda taluks; unreported last week, attacks 4, deaths 6; this week 8 and 5; cattle, condition generally good. 3·25 feet water over anicut.

READ—the following Telegram from Collector of Nellore, to Secretary to Government, Revenue Department, dated 16th November 1885:—

Rice 13·99, cholum 25·21, ragi 31·19, cumbu 29·08. Health generally good; small-pox in Nellore, Udayagiri, Kandukúr, Ongole; rinderpest impaction of the omasum in Nellore, Ongole, Kávali. Standing crops fair; cumbu being harvested in Ongole, Kávali, outturn 10 annas. Agricultural operations—Paddy, cholum, ragi, horse-gram being sown. Water-supply sufficient. Rainfall—Nellore 0·3, Gúdúr 0·9, Atmakúr 0·1, Venkatagiri 0·6, Darsi 4·6, Podili 0·35, Rápúr 0·15, Kandukúr 0·75, Addanki 2·45, Kanigiri 4·45.

READ—the following Report from Collector of Cuddapah, to Secretary to Government, Revenue Department, dated 16th November 1885:—

Average of the district—Rice 13·66, cholum 29·78, ragi 33·97, cumbu 30·37. At the head-quarters—Rice 11·55, cholum 33·82, ragi 31·35, cumbu 28·05. Health good in Jammalamadugu, Proddutur, Sidhout, Pulivendla and Madanapalle taluks; in others a few cases of fever reported in some villages; cattle good. Crops good; but cholum in some villages of Cuddapah taluk reported suffering from blight; the following crops harvested, outturn reported to be on the average—korra $\frac{5}{8}$, indigo $\frac{5}{8}$, paddy $\frac{3}{4}$, cumbu $\frac{1}{2}$, ragi $\frac{5}{8}$, and arika full. Agricultural operations—Clearing channels; sowing bengal-gram, wheat, bariga, ragi, horse-gram, cholum and other crops in some places, and in others preparing lands for sowing cholum, ragi, bengal-gram and wheat; harvesting cumbu and ragi and weeding. Water-supply—Some tanks in Cuddapah, Badvél, Proddutur, Váyalpád and Madanapalle taluks received full supply and others in the district partial supply; Pennér, Pápaghni and Kundu rivers reported still flowing; rivers and spring-channels and wells contain good supply. Rainfall—Proddutur 0·15, Cuddapah 0·30; other stations *nil*.

READ—the following Telegram from Collector of Bellary, to Secretary to Government, Revenue Department, dated 17th November 1885:—

Rice 12·76, white-cholum 24·72, yellow-cholum 27·81, ragi 28·96, cumbu 25·03. Rainfall—Bellary 0·33, Kúdligi 0·30, Hadagalli 0·15, Harpanahalli 0·40, Alúr 0·27, Adóni 0·25, Siruguppa 0·60, Yemmiganúr 0·95. Health generally good; four deaths Adóni, one Bellary, one Alúr from cholera. Sowing white-cholum, bengal-gram, cotton, paddy, wheat; early dry crops much improved; later sowings thriving; wet crops good; harvesting mungari, cholum, cumbu, korra, ragi, yield below average. Rainfall Hospet 0·10 omitted in previous report. Prospects continue favorable.

READ—the following Telegram from Collector of Anantapur, to Secretary to Government, Revenue Department, dated 16th November 1885:—

Rice 13·77, cholum 27·81, ragi 32·98, cumbu 27·32. Anantapur—Rice 11·88, cholum 25·75, ragi 29·10, cumbu 28·20. Fall in price of ragi Anantapur due to plentiful supply. Health generally good; fever Uravakonda division; cholera one attack and death in one village Gooty taluk; small-pox three villages Dharmavaram taluk. Sufficient pasture procurable; standing wet and dry crops generally fair; cholum and ragi attacked by blight in parts of Tadpatri and Dharmavaram taluks respectively; cholum, ragi, paddy, bengal-gram, chillies, onions and wheat being sown in parts of Anantapur, Gooty, Tadpatri taluks; ploughing for paddy in five taluks; cholum, ragi, cumbu, korra, chama, oil-seeds and ground-nuts being harvested in parts of six taluks;

outturn Anantapur 10 annas, Gooty, Dharmavaram, Madakasíra 8, Hindupur between 4 and 12 annas, Penukonda not reported. Water-supplly generally fair except Penukonda town. Rainfall—Gooty 0·04, Uravakonda 0·04, Yadakki 0·4, others *nil*; rainfall 3·08 inches above average; one tank Gooty taluk since reported to have been filled and one in Penukonda to have received three months' supply, and eight others in Penukonda to have received very small supply during the week before last. No cattle-disease reported.

READ—the following Telegram from Collector of Kurnool, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Head-quarters—Rice 12·11, cholum 29·92, cumbu 28·50. District average—Rice 12·57, cholum 30·36, ragi 31·35, cumbu 30·98. Rainfall omitted last week—Dhone 1·70, Owk 0·95; this week, Pattikonda 1·36, Nandikótkur 0·36, Cumbum 0·86, Márkápur 0·40, Dhone 0·40; no rain in seven stations; report not received from one station. Matured early cholum and korra suffered in parts Rámallakót and Nandikótkur from excessive rains; other standing crops fair; horse-gram and bengal-gram being sown; early cereals under harvest, yield half to three-fourths. Small-pox in one taluk; cattle-disease anthrax and foot-disease slightly in one taluk. Pasture and water sufficient. Prices—cholum falling in three taluks and rising in one; cumbu falling in one; other articles stationary. Deaths from cholera three.

READ—the following Report from Collector of Madras, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice (second sort) 12·08, cholum 16·41, cumbu 17·16, ragi 21·92. Health—Fever, dysentery and diarrhœa prevalent; cattle healthy. Imports—Tons, rice 94, other grains 632. Rainfall 0·15.

READ—the following Report from Collector of Chingleput, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 13·67, ragi 26·10, cumbu 18·81, cholum 18·10. Health good in four taluks; fever in Madurántakam and Ponnéri, attacks 47, no loss; treated by Hospital Assistants; cattle good in Conjeeveram and Ponnéri; anthrax in Madurántakam and Saidápet; rinderpest in Madurántakam and Tiruvallúr; malignant sore-throat in Chingleput and dysentery in Tiruvallúr, attacks 130, deaths 62. Crops generally fair; they are reported to have been withering in parts of Madurántakam and Conjeeveram; kar and ragi were harvested in parts, average below half. Pasturage good. Agricultural operations—Ploughing and transplanting samba, sowing ragi in Ponnéri, weeding in Tiruvallúr and Ponnéri. Water-supply moderate; lasting from 10 days to 6 months. Rainfall—Ponnéri 1·00, Tiruvallúr 0·40, Poonamallee 0·65, Saidápet 0·50, Homes' Gardens 0·35, Sríperumbudúr 0·60, Conjeeveram 0·80, Chingleput 1·70, Madurántakam 0·32, Ootramalur 2·05, Sattiyavedu *nil*; all reported; prospects depend upon future rains.

READ—the following Report from Collector of North Arcot, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 14·8, cholum 25·6, ragi 29·6, cumbu 26·1. Health—Fever prevails in the Palmaner taluk and Venkatagiri and Punganúr divisions, and small-pox in parts of the Vellore and Gudiyátam taluks and Venkatagirikóta division; the condition of cattle is generally good except in Wálajápet taluk, in parts of which cattle are reported to be suffering from rinderpest; there were twelve attacks and four deaths. The standing crops are reported to be generally in good condition; paddy, ragi, cholum, indigo and varagu were harvested during the week to a small extent and the yield was below the average. Agricultural operations are progressing, except in the Palmanér taluk and Kangundi, Tirutani and Punganúr divisions where they are reported to be limited. Water-supply—The supply of water in tanks is scanty except in the Vellore, Pólúr and

Wandiwash taluks and Náráyanavaram, Madarpak and Arni divisions. Rainfall—Arcot 0·67, Arkónam 1·15, Arni 0·30, Pólúr 0·90, Puttur 0·35, Tirutani 0·05, Vellore 0·20, Wálajápet 0·50, Wandiwash 1·26; no rain fell during the week at the remaining ten stations where rain-gauges are kept; the average rainfall up to date since January 1885 is 19·63 against 32·75 inches, the average of the past four years; more rain is greatly needed.

Read—the following Report from Collector of South Arcot, to Secretary to Government, Revenue Department, dated 16th November 1885:—

Rice 14·62, cholum 22·68, ragi 31·57, cumbu 31·68.

Average Price of Cholum arrived at for past and previous Weeks—

	Past Week.	Previous Week.
Tiruvannámalai	30·24	30·24
Chidambaram	15·12	21·00
Total ...	45·36	51·24
Average ...	22·68	25·62

Generally healthy; cholera is said to linger in parts of the Chidambaram, Vriddháchalam and Cuddalore taluks, the number of deaths reported during the week was 7 against 7 attacks; small-pox prevailed in parts of Tiruvannámalai taluk and fever in parts of Tindivanam, Villupuram and Tiruvannámalai taluks; cattle were generally healthy, but they suffered from anthrax (அடைப்பான்) in parts of Tiruvannámalai and Villupuram taluks, and the number of deaths reported during the week was 23, *i.e.*, 20 in Tiruvannámalai taluk and 3 in Villupuram taluk, against 5 attacks; the number attacked in the former taluk has not been reported; the Tahsildar promises to report from next week. The standing crops, viz., cumbu, millet, ragi, varagu, cholum, horse-gram, ground-nut and gingelly in dry lands as well as sugar-cane and paddy in wet lands were generally good, but it is reported that ground-nut is damaged by insects in parts of Villupuram taluk and that owing to want of rain paddy suffered to some extent from disease called "anaikkombu" (ஆனைக்கொம்பு) in certain parts of the Chidambaram taluk, and in some parts has commenced to fade; cumbu, ragi and gingelly were harvested in Tindivanam taluk, and ragi, cholum and kar-paddy in the Chidambaram taluk, the outturn varied from 4 to 16 annas in the former taluks and 8 to 12 annas in the latter. Agricultural operations—Ploughing and manuring operations were in progress; dry crops were also weeded in parts of the district; ragi, cholum, horse-gram and paddy were sown in parts of the district; paddy was also transplanted in some places. Water-supply generally good. Rainfall—Merkanam 0·40, Villupuram 0·40, Cuddalore 0·67, Chidambaram 0·55, Vriddháchalam 0·75, Tiruvannámalai 0·15, Tirukoilúr not received, Tindivanam and Kallakurchi *nil*; rainfall up to date from 1st January 1885, 27·13; average rainfall in three previous years 37·29; the average is given for nine stations at which rain-guages have been retained; rain-gauges of eight stations were withdrawn on the dates given below opposite to each:—

Panruti	
Vanur	17th March 1885.
Mannárgudi	18th ,, ,,
Ulundurpet	
Titagudi	21st ,, ,,
Gingee	22nd ,, ,,
Chengam	23rd ,, ,,
Bhuvanagiri	27th ,, ,,
... ...	31st ,, ,,

Read—the following Telegram from Collector of Tanjore, to Secretary to Government, Revenue Department, dated 16th November 1885:—

Rice 14·05, cholum 24·43, ragi 25·62, cumbu 23·56. Rainfall—Tanjore 0·35, Kumbakónam 1·65, Máyavaram 5·55, Shiyáli 3·40, Nannilam 4·15, Negapatam 4·95, Tiruturaipúndi 5·90, Mannárgudi 3·10, Patukóta 2·40, Vallam 0·20, Tranquebar 1·50, Tiruválúr 0·68, Mutupet 2·20, Vedarniem 2·65, Nídámangalam 2·50; no rain in Arantangi; report not received from Tiruvádi; guage supplied to Nídámangalam 7th; rainfall up to average; no prospect of distress at present. Rivers 1 to 7 feet. Crops generally good; in parts of Shiyáli and Patukóta damaged for want of sufficient rain. Harvest—paddy, cholum, ragi, cumbu, outturn below average. Two deaths from cholera; two cattle attacked with sore-throat and died; in other respects, health of people and cattle generally good.

Read—the following Report from Collector of Trichinopoly, to Secretary to Government, Revenue Department, dated 16th November 1885:—

Rice (second sort) 12·33, cholum 21·00, ragi 27·96, cumbu 24·91. Health good.

	Cholera.	
	Attacks.	Deaths.
Udayárpálaiyam taluk	3	3

	Small-pox.	
	Attacks.	Deaths.
Kulitalai taluk	3	1
Perambalúr taluk	57	2
Puđukóta	11	1

Crops good; the caterpillars reported to be injuring the gingelly, castor and gram crops to a certain extent in one taluk are gradually disappearing. Agricultural operations—Paddy, ragi, varagu, cumbu and horse-gram are being sown; paddy is being transplanted; paddy and cumbu are being harvested; outturn paddy 8 to 12 annas and cumbu 4 to 12 annas. Water-supply sufficient.

—	Inches.	Dates on which the rain-gauges were withdrawn.	Dates on which the rain-gauges were restored.
1. Trichinopoly town	0·15	......	
2. Lálgudi	0·00	12th March 1885.	1st Nov. 1885.
3. Iluppúr	4·50	22nd ,, ,,	......
4. Musiri	0·85	......	......
5. Turaiyúr	0·00	16th March 1885.	......
6. Kulitalai	0·62	......	......
7. Manapárai	0·62	16th March 1885.	......
8. Perambalúr	0·25	......	......
9. Jayankondacholapuram	0·46	13th March 1885.	3rd Nov. 1885.
10. Kílpaluvúr	0·00	6th April ,,	4th ,, ,,
11. Ariyalúr	0·50	28th March ,,	......

Rainfall—Pudukóta town 2·06, Alangudi 0·36, Trimiyam 1·05; the rain-gauges of three remaining stations will be restored shortly, all but Ariyalúr have been sent out.

Read—the following Telegram from Collector of Madura, to Secretary to Government, Revenue Department, dated 16th November 1885:—

Rice 12·56, cholum 22·95, ragi 23·15, cumbu 22·6. Rainfall—Madura 0·87, Tirumangalam 3·5, Melúr 1·0, Dindigul 0·06, Periyakulam 0·7, Palni 0·1, Ramnad 3·71, Sivaganga 2·4, Vattanam 4·8, Muturagunáthapatnam 6·12, Tirushuli 0·7, Chinnammanúr 1·2, Kodaikánal 2·23, Nilakotta 0·5; stations not reporting, 6; previous week Tirupatúr 0·6, Pámban 1·0, remaining stations *nil*; rainfall below average; prospects improved. Health of people and cattle generally good; no cattle-disease reported; fever prevalent. Water-supply sufficient. Pasture fair.

READ—the following Telegram from Collector of Tinnevelly, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 13·57, cholum 19·98, cumbu 18·24, ragi 24·06. Rainfall—Huzur 3·97, Tenkarai 4·6, Tinnevelly 4·85, Ambásamudram 5·0, Nánguneri 10· 22, Sankaranainárkoil 1·97, Tenkási 2·47, Otapidáram 3·9, Sátúr 1·2, Tuticorin 4·35, Srívilliputur 3·15 ; rainfall since January 18·89 inches against 22·25 average ; several good freshes down Támbraparni, highest 10 feet. Agricultural operations progressing. Health good ; slight cattle suffer from rinderpest in Otápidáram, two deaths. Standing crops good.

READ—the following Report from Collector of Coimbatore, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 13·40, cholum 20·20, ragi 25·01, cumbu 23·20. Slight fever in three taluks and slight small-pox in two taluks. Paddy good; cholum under wells and in punjah good ; ragi under wells good ; ragi in punjah good in four taluks, and fair and want rain in Kollegál ; cumbu under wells and in punjah good ; harvesting paddy in three taluks, outturn average ; cholum under wells in one taluk, outturn below average ; cholum in punjah in two taluks, outturn average in one taluk and below average in the other taluk ; ragi under wells in six taluks, outturn below average in one taluk, average in four taluks and above average in one taluk ; ragi in punjah in two taluks, outturn average in one taluk and below average in the other taluk ; cumbu under wells in one taluk, outturn below average ; cumbu in punjah in three taluks, outturn average in one taluk and below average in two taluks. Rainfall—Coimbatore 0·09, Mettupálaiyam 1·55, Satyamangalam 3·20, Bhaváni 0·20, Dhárápuram 0·47, Udamalpet 0·50, ten stations *nil*. The prospects of the district remain much the same as last week. The wet crops want water and a general fall of rain is wanted.

READ—the following Telegram from Collector of Nílgiris, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 9·8, cholum 16·2, ragi 19·6, cumbu 22·4. Fall in price must be due to improved crop prospects. Health good. Crops fair. Agricultural operations—Ploughing. Water sufficient. Rainfall—Kótagiri 6·15, Wellington 7·53, fall on 11th 5·58, Kethi 0·54, Ootacamund 0·67, Devála 0·63, Coonoor 9·16, Kódanád 1·64, Naduvatam 0·24, Pykara 0·8, Kundahs 1·32, Gúdalúr *nil*.

READ—the following Report from Collector of Salem, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 13·87, ragi 29·04, cumbu 24·39, cholum 23·25. Crops in good condition ; punjah crops are affected by insects in parts of four taluks ; paddy in four taluks, ragi in one, and cumbu in one, are being harvested, yield below the average. Rainfall not up to average. Agricultural operations—Paddy in general, ragi in one taluk and cholum in one, are being sown. Health generally good ; but fever in parts of one taluk and small-pox in another.

Condition of Cattle.

Taluks.	Name of Disease.	Number attacked.	Number died.
Tiruchengód ...	Vishakuthu ... ... (விஷகுத்து)	1	...
Atúr	Kolaimutti ... ... (கொலைமுட்டி)	Not known.	64
Tirupatúr	(மழைகுந்து)	3	...
Krishnagiri... ...	Foot and mouth disease ... (கோமாரி)	6	...

Water-supply sufficient for agricultural purposes except in three taluks. Rainfall—Tiruchengód 0·20, Atúr 0·55, Tirupatúr 0·10, Shevaroy Hills 0·50, Paramathi 0·30, other stations *nil.*

READ—the following Telegram from Collector of South Canara, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 14·17, ragi 22·37. Small-pox in a few villages of two taluks ; slight fever and measles in parts ; foot-disease among cattle in two taluks. First rice-crop harvest nearly completed, yield average on the whole ; second rice-crop cultivation progressing. Water-supply sufficient. Rainfall—Mangalore 1·45, Bantvál 2·75, Udipi 0·45, Karkal 3·2, Puttúr 4·12, Beltangadi 0·5, Coondapoor 0·33, Kásaragód 0·32, Hosdrug *nil.*

READ—the following Telegram from Collector of Malabar, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Rice 13·00, ragi 22·38. Small-pox slight in four taluks ; fever slight Wynaad and Wálawanád ; cholera in Wálawanád three cases, three deaths. Second-crop cultivation progressing. Cattle-disease slight in four taluks. Pasture fair. Rainfall—Cannanore 0·02, Tellicherry 0·10, Badagara 0·10, Manantoddy 0·55, Chevayur 0·45, Calicut 1·45, Manjeri 2·48, Angádipuram 2·55, Pálghat 1·45, Ponáni 1·60, Cochin 4·48, Vayitri 0·57, Tirurangádi 1·15, Nilambúr 0·02.

READ—the following Telegram from Dewan of Travancore, to Secretary to Government, Revenue Department, dated 16th November 1885 :—

Season telegram Trivandrum. Paddy thriving. Price—Madras second-sort rice 9·6 and paddy 23·9 seers per rupee. Fever in some places. Week's rainfall 1·298.

ORDER—dated 20th November 1885, No. 1299, Revenue.

Miscellaneous.	Communicated to the Board of Revenue.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Sanitary Commissioner.
,, the Chief Engineer for Irrigation.
,, the Surgeon-General with the Government of Madras.
,, the Financial Department.

Exd. W. H. French.

100 Copies.

Govt. of (1885) Madras

REVENUE.

Issued

Recd. En

G.O., 20th November 1885, No. 129

NOVEMBER.

Season.

Reports on the state of — for week ending 14th November 1885, communicated to th Board of Revenue.

No. 2512

Communicated to the Officers in charge of Settlement Parties and to the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 11 December 1885.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No III
" " Special Assistant Collector, Nilgiris and Malabar.
" " Inspector of Cattle Diseases.

27TH NOVEMBER 1885, No. 1318, REVENUE.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Season Reports for the Week ending 21st November 1885.

READ—the following Telegram from Collector of Ganjam, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 13·18, ragi 27·06, cholum 21·83, cumbu 31·77. No rain ; three rain-gauges removed ; none yet restored. Cholera deaths 42 ; cattle-disease (cow-pox) slightly exists in Berhampore and Narsannapet taluks. Reaping of light paddy commenced ; other irrigated paddy generally thriving.

READ—the following Telegram from Collector of Vizagapatam, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 12·8, cholum 20·1, ragi 28·1, cumbu 29·6. Small-pox six taluks ; fever six ; no cattle-disease. In Anakápalle, Vizianagrum, Pálkonda, Párvatipur crops good ; in Golgonda, Sarvasiddhi, Vizagapatam paddy suffering from blight, elsewhere standing crops fair ; green-gram, ulundu harvested in Chípurupalle, outturn each one-eighth ; ragi in Bimlipatam, outturn half ; ragi sown in Bimlipatam only ; tobacco transplanted in Viravilli. Water-supply sufficient. Rainfall above average by 1·4 inches ; no rain during week in 15 stations ; gauges from Bobbili, Gajapatinagar, Gúdem, Srungavarapukóta, Kotipad, Malkangiri, Naurangapur withdrawn 1st April ; Paderu, Pottungi, 8th April ; Gunipur, 17th March.

READ—the following Telegram from Collector of Godávari, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 14·10, cholum 27·83, ragi 29·66, cumbu 32·25. Fever and small-pox slight ; cholera 59 deaths seven taluks ; no cattle-disease. Standing crops generally good ; rasangi paddy being harvested, outturn ¾ ; paddy approaching maturity ; tobacco being transplanted. Godávari water 8·50 feet above lock-sill. Rainfall—Cocanada 0·60, Prattipadu 1·50, Kottapeta 0·10 ; rainfall to date is above average ; Alamúr, Kottapeta, withdrawn 2nd and 26th April, respectively ; not restored ; approximate measurement reported.

READ—the following Telegram from Collector of Kistna, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 12·91, cholum 21·21, ragi 27·03, cumbu 23·35. No rain ; rainfall 1st January to date 29·64 against average last three years 34·82. Varagu, tobacco, pulses sown. All rain-gauges restored. Standing crops generally good ; cholum damaged by late rains in Bápatla and Guntúr taluks ; castor affected by insects. Fever, small-pox and guinea-worm in places ; cholera prevailed in Répalle, Guntúr and Bezváda taluks ; unreported last week attack 1, death 1 ; this week 10 and 6 ; cattle-disease in one village of Narsaraopet and two of Vinukonda taluks ; rinderpest, attacks 13, deaths 11 ; dropsy 17 and 14. 2·8 feet water over anicut.

READ—the following Telegram from Collector of Nellore, to Secretary to Government, Revenue Department, dated 23rd November 1885:—

Rice 13·93, cholum 25·46, ragi 32·07, cumbu 28·97. Health generally good; small-pox in Nellore, Udayagiri, Ongole, Kandukúr; cattle-disease—rinderpest, inflammatory fever in Kandukúr, Kávali, Nellore, Atmakúr, deaths 28. Crops standing fair; cumbu being harvested in Ongole, outturn 12 annas. Agricultural operations—Paddy, cholum, ragi, horse-gram being sown. Water-supply sufficient; freshes in Pennér; most of the tanks received half, three-fourth supply. Rainfall—Nellore 13·3, Gúdúr 14·3, Atmakúr 5·5, Kávali 4·15, Allúr 10·3, Pólúr 15·9, Venkatagiri 15·7, Rápúr 13·7, Udayagiri 1·2, Kandukúr 1·05, Ongole 0·2, Sangam 6·55.

READ—the following Report from Collector of Cuddapah, to Secretary to Government, Revenue Department, dated 23rd November 1885:—

Average of the district—Rice 13·77, cholum 29·65, ragi 33·97, cumbu 30·75. At the head-quarters—Rice 11·55, cholum 32·58, ragi 31·35, cumbu 32·17. Health good in Jammalamadugu, Proddutur, Sidhout, Pulivendla and Madanapalle taluks; in others, a few cases of fever reported; in Chitvél of Pullampet taluk cattle reported suffering from splenic apoplexy (నరడబాప్పు); there were 20 attacks, 12 deaths; in others good. Crops good; but cholum in some places of Cuddapah taluk reported suffering from blight. The following crops harvested, outturn reported to be on the average—indigo $\frac{11}{16}$, korra $\frac{3}{4}$, paddy $\frac{3}{4}$, cumbu $\frac{3}{8}$ and ragi $\frac{5}{8}$. Agricultural operations—Sowing indigo, paddy, ragi, horse-gram, bengal-gram, beriga, wheat and other crops in some places, and in others preparing lands for sowing these crops; harvesting indigo, cumbu, and paddy and weeding. Water-supply—All tanks in Pullampet and some tanks in Cuddapah and Badvél taluks received full supply and others in the district partial supply; there were heavy freshes in the Cheyér, Gunjana and Pullanger rivers; river and spring-channels and wells contain good supply. Rainfall—Badvél 0·35, Sidhout 1·40, Pullampet 12·10, Cuddapah 0·62, Pulivendla 0·25, Ráya- chóti 3·65, Kadiri 0·70, Váyalpád 4·25, Madanapalle 3·05, Chitvél 8·00, Pílér 7·00; other stations *nil*.

READ—the following Telegram from Collector of Bellary, to Secretary to Government, Revenue Department, dated 23rd November 1885:—

Rice 12·62, white-cholum 25·49, yellow-cholum 27·61, ragi 29·34, cumbu 24·77. Rainfall *nil*. Health generally good; two deaths, Adóni, from cholera; one she-buffalo died of cattle-disease Kúdligi. Sowing white-cholum, bengal-gram, wheat; early dry crops much improved; later sowings thriving; in parts of Harpanahalli taluk white-cholum attacked with disease, and castor-seed and pulses eaten by caterpillars; wet crops good; harvesting paddy, ragi, yield average; cholum, cumbu, korra, yield average in parts and below average in others. Prospects continue favorable.

READ—the following Report from Collector of Anantapur, to Secretary to Government, Revenue Department, dated 23rd November 1885:—

Rice 13·77, cholum 27·81, ragi 33·47, cumbu 27·94. Anantapur—Rice 11·88, cholum 24·72, ragi 30·07, cumbu 29·14. Health generally good; fever and small-pox exist in parts of Uravakonda division, and small-pox alone in two villages of Dharmavaram taluk; cholera reported last week in Gooty taluk has ceased. Sufficient pasture is procurable throughout the district. No cattle-disease is reported from any taluk. Standing wet and dry crops are generally in fair condition; cholum has been attacked by blight in some parts of Tadpatri taluk, but fresh stems are shooting out by the side of the plants. Agricultural operations—Paddy, ragi, cholum, bengal-gram, coriander and wheat are being sown in parts of Gooty, Tadpatri and Hindupur taluks; cholum, oil-seeds, cumbu, chama, korra, ragi, ground-nuts and paddy are being harvested in parts of Anantapur, Dharmavaram, Hindupur and Madakasíra taluks, outturn in the several taluks is 10 annas, 8 annas, between 4 and 12 annas and 8 annas respectively. Water-supply fair everywhere. Rainfall—Penukonda 0·2, Hindupur 0·075, Bukkapatnam 0·1 ; other stations *nil*.

REMARKS.—The rainfall from January up to date this year is 2·57 inches above the average for the last five years. The telegraph line between this station and Guntakal being interrupted, this report is submitted by post.

READ—the following Telegram from Collector of Kurnool, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Head-quarters—Rice 12·11, cholum 30·62, cumbu 27·07. District average—Rice 12·57, cholum 30·04, ragi 31·35, cumbu 30·63. Rainfall omitted last week Atmakúr 0·30 ; no rain in this week. Matured early cholum and korra suffered in parts Rámallakót and Nandikótkur from excessive rains ; other standing crops fair ; sowing of horse-gram and bengal-gram continues ; early cereals being harvested, outturn half to three-fourths. Small-pox in two taluks ; cattle-disease, dysentery and foot-disease slightly in two villages. Pasture and water sufficient. Prices—Cholum falling in one taluk and rising in another ; cumbu rising in one ; other articles stationary. Deaths from cholera three.

READ—the following Report from Collector of Madras, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice (second sort) 12·08, cholum 16·41, cumbu 17·16, ragi 21·92. Health—Fever and small-pox prevalent ; cattle healthy ; no cholera. Imports—Tons, rice 41, other grains 158. Rainfall 16·05.

READ—the following Report from Collector of Chingleput, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 13·81, ragi 26·40, cumbu 18·81, cholum 17·20. Health good in three taluks ; small-pox in Madurántakam and Chingleput, attacks 3, death 1 ; fever in Conjeeveram, attacks 24, no loss ; cattle good in Saidápet ; anthrax in Madurántakam and Ponnéri ; rinderpest in Madurántakam and Tiruvallúr ; dropsy in Conjeeveram and Tiruvallúr ; malignant sore-throat in Chingleput, attacks 133, deaths 78. Crops good ; kar harvested in parts, average below half. Pasturage good. Agricultural operations—Ploughing and transplanting samba ; sowing ragi in Ponnéri ; weeding in Tiruvallúr and Ponnéri. Water-supply sufficient ; two tanks in Saidápet have breached. Rainfall—Sattiavedu 17·40, Ponnéri 14·37, Tiruvallúr 13·80, Poonamallee 14·55, Saidápet 16·55, Homes' Gardens 18·30, Sríperumbudur 11·30, Conjeeveram 13·17, Chingleput 17·80, Madurántakam 16·25, Ootramalur 11·67 ; all reported. Prospects fair.

READ—the following Report from Collector of North Arcot, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 14·7, cholum 25·2, ragi 29·8, cumbu 25·2. Health—Fever prevails in the Palmanér taluk and Venkatagirikóta and Tirupati divisions, and small-pox in parts of the Gudiyátam taluk and Venkatagirikota division ; no report of disease among cattle was received during the week. The standing crops are reported to be generally in good condition ; paddy and indigo were harvested during the week to a limited extent, and the yield was below the average. Agricultural operations are progressing except in the Kangundi and Punganúr divisions, where they are reported to be limited. Water-supply—Tanks have generally received from one to six months' supply except in Palmanér taluk and Kangundi division, where the supply of water is scanty ; one tank in the Pólúr taluk and a few in Kálahasti division have breached. Rainfall—Arcot 8·35, Arkónam 8·97, Arni 5·90, Chandragiri 13·10, Chittoor 6·90, Gudiyátam 4·93, Kálahasti 23 20, Kangundi 1·40, Maderpâk 17·73, Palmanér 3·80, Pólúr 4·50, Punganúr 2·85, Puttúr 14·00, Tirutani 10·80, Tirupati 10·00, Vellore 7·72, Venkatagirikóta 0·90, Wálajápet 8·90, Wandiwash 9·92; the average rainfall up to date since January 1885 is 28·25 against 34·48 inches, the average of the past four years; more rain is needed in Chittoor, Gudiyátam, Palmanér taluks and Punganúr and Kangundi zemindaries.

Read—the following Report from Collector of South Arcot, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 14·59, cholum 27·72, ragi 31·20, cumbu 31·76.

Average Price of Cholum arrived at for past and previous Weeks—

	Past Week.	Previous Week.
Tiruvannámalai ...	30·24	30·24
Chidambaram ...	25·20	15·12
Total ...	55·44	45·36
Average ...	27·72	22·68

Generally healthy; guinea-worm prevailed in parts of Tiruvannámalai taluk, and fever in parts of Villupuram, Vriddháchalam and Tiruvannámalai taluks; cattle were generally healthy, but they suffered from anthrax (அடைப்பான்) in parts of Villupuram and Tiruvannámalai taluks, and the number of deaths reported during the week was 11, *i.e.*, 9 in the former and 2 in the latter taluk against 12 and 2 attacks respectively. The standing crops, viz., cumbu, millet, ragi, varagu, cholum, horse-gram, ground-nut and gingelly in dry lands, as well as sugar-cane and paddy in wet lands, were generally good, but it is reported that young paddy plants on the sides of rivers and streams in parts of Vriddháchalam taluk were damaged by heavy rain and freshes; kar-paddy was harvested only in parts of Vriddháchalam taluk, and the yield was 8 annas. Agricultural operations—Ploughing, manuring and weeding operations were in progress in parts of the district; ragi, cholum, horse-gram and paddy were sown in parts of the district; paddy was also transplanted in some places. Water-supply—There were heavy freshes in the Gadilam and Vellár, and moderate ones in the Manimuktanadi, the Coleroon and the Pennér; it is also reported that some tanks have breached in the Vriddháchalam and Chidambaram taluks. Rainfall—Villupuram 7·80, Cuddalore 20·26, Chidambaram 20·35, Vriddháchalam 11·55, Kallakurchi 5·50, Tirukoilúr 5·95, Tiruvannámalai 6·25; Tindivanam and Merkanam reports not received; rainfall at Tirukoilúr for previous week was 0·15 inches; rainfall up to date from 1st January 1885, 38·62; average rainfall up to date in three previous years 31·68; the average is given for nine stations at which rain-gauges have been retained; rain-gauges of eight stations were withdrawn on the dates given below opposite to each :—

Panruti ...	17th March 1885.
Vanur Mannárgudi	18th ,, ,,
Ulundurpet ...	21st ,, ,,
Titagudi ...	22nd ,, ,,
Gingee ...	23rd ,, ,,
Chengam ...	27th ,, ,,
Bhuvanagiri ...	31st ,, ,,

Read—the following Telegram from Collector of Tanjore, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 14·00, cholum 23·83, ragi 26·18, cumbu 23·56. Rainfall—Tanjore 7·30, Kumbakónam 7·48, Máyavaram 13·05, Shiyáli 12·82, Nannilam 10·35, Negapatam 21·66, Tiruturaipúndi 14·90, Mannárgudi 8·90, Patukóta 10·15, Tranquebar 18·30, Tiruválúr 14·20, Vedarniem 16·95, Mutupet 10·40, Arantangi 4·60, Tiruvadi 7·10, Vallam 7·35, Nídámangalam 7·50, Tiruvadi 0·83; in previous week rainfall above average, but no prospect of distress. Rivers 4 to 10 feet. Crops generally good;

in parts of Máyavaram and Tiruturaipúndi damaged by excessive rain and in the latter by floods also. Harvest—paddy, cholum, ragi, outturn below average. Health of people and cattle generally good.

Read—the following Report from Collector of Trichinopoly, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice (second sort) 12·76, cholum 21·00, ragi 28·25, cumbu 24·91. Health good; cholera and cattle-disease almost *nil*; small-pox very slight—

	Cholera.	
	Attacks.	Deaths.
Trichinopoly taluk	1	...

	Small-pox.	
	Attacks.	Deaths.
Udayárpálaiyam taluk	6	2
Perambalúr taluk	5	...
Pudukóta	5	2

	Cattle-disease.	
	Attacks.	Deaths.
Jayankondacholapuram	1	...
Lálgudi	1	...

Standing wet and dry crops are in good condition. Agricultural operations—Paddy, ragi, cumbu, cotton, horse-gram sown; paddy transplanted in parts of three taluks; kar-paddy harvested, with outturn ranging from 8 to 12 annas. Water-supply—Four feet 4 inches of water flow down the Cauvery; river-channels are fairly full; rain-fed tanks have from one to three months' supply.

Rainfall.

	Inches.	Restored.		Inches.	Restored.
Trichinopoly Town ...	4·35	...	Kílpaluvúr	5·70	4th November
Illuppúr	2·95	4th November	Ariyalúr	9·00	...
Lálgudi	4·40	1st do.	Pudukota Town ...	4·40	...
Kulitalai	1·87	...	Keelanilai	1·72	...
Manapárai	2·17	29th October	Alangudi	4·95	...
Musiri	2·70	...	Viralimalai	0·96	...
Turaiyúr	2·30	21st November	Kolattur	4·80	...
Perambalúr	5·30	...	Trimiyam	3·70	...
Jayankondacholapuram.	8·25	3rd November			

All but Ariyalúr have been restored on the dates noted against them.

Read—the following Telegram from Collector of Madura, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 12·67, cholum 22·95, ragi 22·91, cumbu 22·87. Rainfall—Madura 1·42, Tirumangalam 2·35, Melúr 2·17, Periyakulam 1·1, Palni 3·75, Ramnad 3·5, Sivaganga 4·6, Vattanam 5·15, Kodaikánal 5·91, Tirupatúr 2·27, Tirushuli 1·42, Chinnamanúr 2·6, Nilakotta 0·3; stations not reporting, 7; previous week Morekulam 6·12, Pámban 4·3; remaining stations *nil*; rainfall below average. Health of people and cattle generally good; slight cholera in Ramnad zemindari, total death one; fever prevalent; 130 deaths among cattle in Madura taluk, 30 from braxy and 100 from variola ovina. Water-supply sufficient. Pasture fair.

Read—the following Telegram from Collector of Tinnevelly, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 13·52, cholum 20·07, cumbu 18·79, ragi 24·49. Rainfall—Huzur 1·65, Tenkarai 1·8, Tinnevelly 1·63, Ambásamudram 1·25, Nánguméri 1·95, Srívilliputur 2·65, Sankaranainárkoil 2·05, Tenkási 1·25, Otapidáram 3·6, Sátúr 1·3, Tuticorin 3·63;

rainfall since January 20·96 inches against 23·32 average; more rain wanted in parts of Srívilliputur and Sankaranainárkoil. Agricultural operations continue. Health good; cattle well. Standing crops good.

Read—the following Report from Collector of Coimbatore, to Secretary to Government, Revenue Department, dated 23rd November 1885:—

Rice 13·58, cholum 20·29, ragi 25·41, cumbu 23·99. Slight fever in two taluks and slight small-pox in one taluk. Paddy good; cholum under wells and in punjah good, but cholum in punjah want rain in Coimbatore; ragi under wells and in punjah good, but ragi in punjah want rain in Coimbatore; cumbu under wells and in punjah good, but cumbu in punjah want rain in Coimbatore; harvesting paddy in six taluks, outturn average in two taluks and above average in four taluks; cholum in punjah in one taluk, outturn below average; ragi under wells in five taluks, outturn average in two taluks, above average in two taluks, and below average in one taluk; ragi in punjah in one taluk, outturn above average; cumbu in punjah in two taluks, outturn average in one taluk and below average in the other taluk. Rainfall—Coimbatore 0·45, Mettupálaiyam 0·98, Satyamangalam 0·95, Tálavádi 2·09, Bhavání 1·10, Erode 1·10, Perundurai 0·70, Karúr 1·08, Aravakurchi 0·93, Palladam 0·35, Dhárápuram 1·18, Kángyam 0·48, Udamalpet 1·45, Polláchi 0·85, Kollegál 1·45; one station *nil*; there was scanty rain throughout the district 16th and 17th, which did good; Coimbatore is the only taluk reported wanting rain; but the wells are low in Dhárápuram.

Read—the following Telegram from Collector of Nílgiris, to Secretary to Government, Revenue Department, dated 23rd November 1885:—

Rice 9·7, cholum 16·0, ragi 19·2, cumbu 22·4. Health good. Crops fair. Agricultural operations—Land being ploughed; second crop being sown. Water sufficient. Rainfall—Wellington 0·66, Kótagiri 2·90, Kódanád 8·54, Coonoor 1·19, Kethi 2·05, Ootacamund 4·90, Pykara 10·45, Naduvatam 5·33, Gúdalúr 1·88, Devála 0·80, Kundahs 0·82.

Read—the following Report from Collector of Salem, to Secretary to Government, Revenue Department, dated 23rd November 1885:—

Rice 14·24, ragi 29·00, cumbu 25·21, cholum 23·25. Crops in good condition; punjah crops are affected by insects in parts of three taluks; paddy in four taluks, ragi in two, and cumbu in one, are being harvested, yield below the average; rainfall not up to average. Agricultural operations—Paddy in general and cholum in two taluks are being sown. Health generally good, but fever and small-pox in parts of Tirupatúr; cattle-disease in parts of three taluks—

	Number attacked.	Number died.
Foot and mouth disease	16	...
Fever	2	1
Anthrax	13	7

Water-supply sufficient for agricultural purposes except in three taluks. Rainfall—Salem 1·32, Námakal 1·50, Tiruchengód 1·00, Atúr 2·55, Hosúr 1·30, Dharmapuri 2·60, Tirupatúr 2·25, Uttankarai 2·10, Shevaroy Hills 3·40, Rájapuram 1·05, Omalúr 1·68, Paramathi 1·00, Sankaridrug 1·20, Denkanikóta 1·05, Vániyambádi 1·78, Harur 3·25; Krishnagiri and Pennagaram returns not received.

Read—the following Telegram from Collector of South Canara, to Secretary to Government, Revenue Department, dated 23rd November 1885:—

Rice 14·32, ragi 22·67. Small-pox continues in a few villages of two taluks; slight fever and measles in parts; foot-disease and diarrhœa among cattle in parts of three taluks. First rice-crop harvest completed, yield average on the whole; second rice-crop cultivation progressing. Water-supply sufficient. Rainfall *nil*.

27th November 1885, No. 1318, Revenue.

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Read—the following Telegram from Collector of Malabar, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Rice 12·90, ragi 22·94. Small-pox slight in four taluks; fever slight Wynaad and Wálawanád; cholera in Wálawanád, 13 cases, 10 deaths. Harvesting of later first crop commenced in Pálghat, outturn 14 annas; second-crop cultivation slightly attacked by insects in Wálawanád, elsewhere in fair condition. Cattle-disease in Wálawanád, 17 attacks, chiefly of aptha, epizootica, 8 deaths. Pasture fair. Rainfall—Badagara 0·25, Manantoddy 0·40, Chevayur 0·22, Manjeri 0·14, Angádipuram 0·20, Pálghat 0·10, Ponáni 0·20, Cochin 0·72, Vayitri 0·25, Tirurangádi 0·20, Nilambúr 0·47; three stations *nil*.

Read—the following Telegram from Dewan of Travancore, to Secretary to Government, Revenue Department, dated 23rd November 1885 :—

Season telegram, Trivandrum. Paddy thriving. Price—Madras second-sort rice 9·6 and paddy 23·9 seers per rupee. Fever in some places. Week's rainfall 1·399.

Order—dated 27th November 1885, No. 1318, Revenue.

Miscellaneous.

Communicated to the Board of Revenue.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Sanitary Commissioner.
,, the Chief Engineer for Irrigation.
,, the Surgeon-General with the Government of Madras.
,, the Financial Department.

Exd. W. H. French.

100 Copies.

Govt. of {1885} Madras.

REVENUE.

Issued

Recd. *Encl.*

G.O., 27th November 1885, No. 1318

NOVEMBER.

Season.

Reports on the state of — for week endin
21st November 1885, communicated to the Boar
of Revenue.

No. 2511

Communicated to the Officers in charge of Settlement
rties and to the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 11 December 1885.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No. II
„ „ Special Assistant Collector, Nilgiris and Malabar.
„ „ Inspector of Cattle Diseases.

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Regd. No.

17TH NOVEMBER 1885, No. 1282, REVENUE. 153

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following Proceedings of the Board of Revenue, dated 23rd October 1885, No. 2957:—

Read—the following letter from J. F. PRICE, Esq., Acting Director of Revenue Settlement and Agriculture, to the Secretary to Government, Revenue Department (through the Board of Revenue), dated Madras, 6th October 1885, No. 1874:—

I have the honor to submit the budget estimate of the agricultural department for 1886-87.

2. *Receipts.*—As the Government Farm at Saidápet was, in accordance with G.O., Revenue Department, No. 532, dated 5th May 1885, closed on the 1st September last, the revised estimate of receipts from that source, for the current year, has been fixed at Rs. 4,000 with reference to the actuals for the past five months and including the contribution of Rs. 2,000 for the improvement of agriculture and trade. As the Farm has ceased to exist, this contribution has, for the coming year, been shown to the credit of *improvement of agriculture and trade* as a separate sub-head. The estimate of the receipts of the cattle disease inspection department has been framed with reference to the actuals of the past official year.

No. 639, dated 1st June 1885.
„ 978 „ 28th August „

3. *Charges.*—The grant for the current year as reduced and finally approved in the Government Orders noted in the margin amounted to Rs. 57,730; the estimate as now revised amounts to Rs. 57,250 or Rs. 480 less than the reduced grant.

4. In the revised estimate for the current year provision has been made to meet the following charges:—

	RS.
Upkeep of stock on the Farm pending furthers orders as to their disposal	700
Models, &c., for the London Exhibition	400
Increase of Mr. Mills' salary recently sanctioned (*vide* G.O., Revenue department, No. 915, dated 10th August 1885)	1,335
Total ...	2,435

5. The estimate for the ensuing year 1886-87 has been strictly confined to the sanctioned scale of establishment for the agricultural and cattle disease departments, the details of which are given in the enclosed memorandum, No. 2.

6. The sum of Rs. 1,000 under each of the items, "exhibition of improved ploughs and machines" and "ploughing competition" has been provided in the ensuing year's estimate, in the hope that funds for this purpose may then be available. I have shown under the head of *improvement of agriculture and trade* Rs. 3,000 for the coming year, as it appears to me that there are several matters connected with this subject which merit attention and upon which money can be advantageously spent. I trust, therefore, that the allotment sought may be granted. I presume that the charges for the tobacco curer referred to in G.O., Revenue department, No. 934, dated 15th August 1885, will be met by a special allotment.

7. The full salaries and allowances of local cattle disease inspectors have also been entered in the next year's estimate, as it has not yet been decided by Government as to what portion of these officers' salaries, if any, should be debited to Local Funds.

8. The total charges for the next year amount to Rs. 62,000 against Rs. 57,250 for the current year and Rs. 54,791 the actuals of the past year (1884-85). The

chief increase occurs in the cattle disease inspection department under the head of salaries, increases in which have been sanctioned by Government. Both the agricultural and veterinary branches are growing departments, and it is therefore impossible to, for some time to come, prevent the charges on account of them growing larger from year to year.

9. No provision has been made for the pay of the agricultural inspectors proposed by my predecessor (*vide* this office letter, No. 551-A, dated 6th April last, embodied in Board's Proceedings, No 1490, dated 20th May 1885). I certainly think that they would be very useful and that they must sooner or later be employed, but as nothing definite has been decided, I have left matters as they are.

No. 1.—Budget estimate of the Agricultural Department for 1886-87, as compared with the actuals of 1884-85 and estimate for 1885-86.

No.	Items.	Actuals for 1884-85.	Budget estimate for 1885-86.	Revised estimate for 1885-86.	Budget estimate for 1886-87.
	RECEIPTS.	RS.	RS.	RS.	RS.
	Government Farm.				
1	Crop produce	1,454	2,000	620	...
2	Live stock	1,203	1,200	930	...
3	Implements, &c.	977	150	300	...
4	Sundries, &c.	316	400	150	...
5	Contribution for the improvement of agriculture and trade	2,000	2,000	2,000	...
		5,950	5,750	4,000	...
	IMPROVEMENT OF AGRICULTURE AND TRADE.				
	Contribution from Provincial funds ...	...	...	...	2,000
	CATTLE DISEASE INSPECTION.				
1	Fees for treatment of animals, &c. ...	437	200	400	400
	Total receipts ...	6,387	5,950	4,400	2,400
	CHARGES.				
	GOVERNMENT FARM.				
	I. General Supervision.				
1	Establishment	12,670	12,000	11,400	...
2	Travelling allowances	1,804	1,500	1,500	...
3	Stationery	125	200	50	...
4	Printing charges	...	400	200	...
5	Contingencies	385	400	400	...
6	Medical officer's allowance	390	...	...	...
		15,374	14,500	13,550	...
	II. SAIDAPET EXPERIMENTAL FARM.				
1	Establishment	1,403	880	660	...
2	Cooly labor	2,861	1,200	1,450	...
3	Implements and machines	527	150	170	...
4	Live stock	1,945	600	1,400	...
5	Seeds	125	75	30	...
6	Manures	433	50	70	...
7	Contingencies	189	75	30	...
		7,483	3,030	3,810	...

No. 1.—Budget estimate of the Agricultural Department for 1886-87, as compared with the actuals of 1884-85 and estimate for 1885-86—(*Continued*).

No.	Items.	Actuals for 1884-85.	Budget estimate for 1885-86.	Revised estimate for 1885-86.	Budget estimate for 1886-87.
		RS.	RS.	RS.	RS.
	III. ESTATE CHARGES AND IMPROVEMENTS.				
1	Repairs to Superintendent's quarters ...	...	...	...	...
2	Do. to Farm buildings	318	25	20	...
3	Do. to roads	195	25	10	...
4	Sundry repairs and improvements ...	132	50	25	...
5	Extension and repair of water channels.	251	150	95	...
6	Irrigation experiments	387	...	...	...
		1,283	250	150	...
	IV. AGRICULTURAL SERVICES.				
1	Establishment	...	...	...	11,000
2	Travelling allowances	...	...	...	1,800
3	Printing charges	...	...	...	200
4	Contingencies	...	...	...	300
		...	...	...	13,300
	V. DISTRICT OPERATIONS.				
1	Exhibition of improved ploughs and machines	941	200	200	1,000
2	Improvement of agriculture and trade ...	357	2,000	2,000	3,000
3	Distributing seeds	1,010	1,000	800	700
4	Ploughing competitions	335	...	100	1,000
5	Models for London Exhibition	...	...	400	...
		2,643	3,200	3,500	5,700
		26,783	20,980	21,010	19,000
	VI. CATTLE DISEASE INSPECTION.				
1	Establishment	11,772	11,770	13,350	14,170
2	Travelling allowances	1,902	1,850	2,000	2,000
3	Hospital establishment	868	1,120	820	820
4	Stipends to probationary local cattle disease inspectors	1,405	1,200	1,120	500
5	Travelling allowance of cattle disease inspectors	686	...	300	150
6	Hospital expenses including contingencies	1,463	1,300	1,300	1,300
7	Medicines	1,223	1,200	1,200	1,200
8	Upkeep of hospital including hospital-keeper's quarters	200	150	200	200
9	Contingencies including stationery, furniture, &c	618	1,000	700	700
10	Anthrax inoculation experiments ...	450	...	400	200
11	Local cattle disease inspectors. { Salaries	5,513	12,340	10,350	15,380
	Travelling allowance...	1,616	3,690	3,500	5,100
	Contingencies ...	292	1,130	1,000	1,280
	Total ...	28,008	36,750	36,240	43,000
	Grand Total ...	54,791	57,730	57,250	62,000

No 2.—Detail of establishment of Agriculture and the Cattle Disease Inspection.

Items.		Monthly salary.	Annual cost.	—
GENERAL SUPERVISION.		RS.	RS.	
Assistant Director—	RS.			
Salary	700			Salary and allowances as at present drawn.
House-rent	45			
Carriage allowance	30	775	...	
Office establishment—				
	RS.			
Manager	45			
Clerk	30			
Storekeeper	30			
Two peons and one lascar, at Rs. 7 each	21	126	...	
		901	10,812	
Extra establishment required on tours...	...	...	188	
		...	11,000	
CATTLE DISEASE INSPECTION.				
Inspector—	RS.			
Salary	800			*Vide* G.O., dated 10th August 1885, No. 915, Revenue department.
House-rent	50	850	...	
Deputy inspector	...	300	...	
Office establishment of inspector	...	31	...	
		1,181	14,172	
HOSPITAL ESTABLISHMENT.				
Hospitalkeeper	...	50	...	
One peon and two mallies, at Rs. 6 each	...	18	...	
		68	816	
		...	14,988	

No. 3.—List of Local Cattle Disease Inspectors.

District.	Name.	Date of Appointment.	AMOUNT REQUIRED.				Remarks.
			Salaries.	Travelling allowances.	Contingencies.	Total.	
			RS.	RS.	RS.	RS.	
Trichinopoly	P. Raghava Pillai	1st July 1883	900	250	60	1,210	
Nellore	T. Ramanjulu Naidu	Do.	900	250	60	1,210	
....	M. Narain Row	25th July ,,	900	250	60	1,210	
Tanjore	M. V. Ramachendra Iyer.	26th ,, ,,	900	250	60	1,210	
Vizagapatam	B. Ramiah Reddi	25th Aug. ,,	900	250	60	1,210	
....	M. N. Suvarnalingam Naik.	24th ,, ,,	600	200	60	860	
Coimbatore	M. Bhavani Shunker Row.	1st April 1884	875	250	60	1,185	
Nilgiris	Mr. S. L. D'Silva	3rd July ,,	800	350	60	1,210	
Salem	M. Venkataramana Sastri	Do.	800	250	60	1,110	
Bellary	K. Padmanabhayya	16th July ,,	790	250	60	1,100	
Chingleput	A. Cautiah Moodelly	26th ,, ,,	780	250	60	1,090	

No. 3.—List of Local Cattle Disease Inspectors—(*Continued*).

District.	Name.	Date of Appointment.	AMOUNT REQUIRED.				Remarks.
			Salaries.	Travelling allowances.	Contingencies.	Total.	
			RS.	RS.	RS.	RS.	
North Arcot ..	M. Kuppusamy Sastry ..	20th Sept. 1884 ..	735	250	60	1,045	
South Canara ..	B. K. Santaya	25th ,, ,, ..	730	250	60	1,040	
South Arcot ..	K. Setku Row	19th Jan 1885 ..	635	250	60	945	
Tinnevelly ..	V. P. Subbramaniam Moodelly.	8th July ,, ..	600	200	60	860	
Anantapur ..	C. Visvanatha Iyer ..	Do. ..	600	200	60	860	
Malabar ..	K. Raman Menon ..	16th July ,, ..	600	200	60	860	
Madura ..	R. Narain Row	6th Aug. ,, ..	600	200	60	860	
Last batch sanctioned in G.O., No. 1041, *dated* 14*th September* 1885.							
....	S. R. Ramalinga Iyer ..	10th July 1886 ..	375	150	40	565	Eligible for promotion in 1886-87 from the dates entered opposite to them.
....	V. Seethamber Davoo ..	13th ,, ,, ..	375	150	40	565	
....	G. Rungiah Naidoo ..	24th ,, ,, ..	360	150	40	550	
....	M. Hussain Ally ..	11th Aug. ,, ..	325	150	40	515	
....	Another student ..	1st Sept. ,, ..	300	150	40	490	
		Total ..	15,380	5,100	1,280	21,760	

Resolution—dated 23rd October 1885, No. 2957.

The budget estimate of the Agricultural department for 1886-87, received with the foregoing letter, is herewith submitted for the orders of Government.

2. The following abstract compares, under main heads, the receipts and charges as estimated by the Director :—

Items.	Actuals of 1884-85.	Budget estimate for 1885-86.	Revised estimate for 1885-86.	Budget estimate for 1886-87.
Receipts.	RS.	RS.	RS.	RS.
1. Government Farm	3,950	3,750	2,000	...
2. Contribution for the improvement of agriculture and trade	2,000	2,000	2,000	2,000
3. Cattle disease inspection	437	200	400	400
Total ...	6,387	5,950	4,400	2,400
Charges.				
1. General supervision	15,374	14,500	13,550	...
2. Saidápet Experimental Farm	7,483	3,030	3,810	...
3. Estate charges and improvements	1,283	250	150	...
4. Agricultural services	...	...	...	13,300
5. District operations	2,643	3,200	3,500	5,700
Total ...	26,783	20,980	21,010	19,000
6. Cattle disease inspection	28,008	36,750	36,240	43,000
Grand Total ...	54,791	57,730	57,250	62,000

3. *Receipts—Item* 1, *Government Farm.*—The abolition of the Government Farm at Saidápet from 1st September 1885 accounts for the decrease in the revised estimate as compared with the sanctioned amount and for the absence of any provision for the ensuing year.

Item 3, *Cattle Disease Inspection.*—The provision under this head consists of fees, &c., for treating animals and has been fixed both for the revised and budget estimates with reference to the actuals of 1884-85.

4. *Charges.*—The charges for the current year were originally estimated at Rs. 65,400, but the amount was subsequently reduced by Rs. 7,670 in consequence of orders received from the Government of India for restricting expenditure as much as possible. The revised estimate now furnished exhibits a further decrease of Rs. 480 resulting from decreases under (1) general supervision, (3) estate charges and improvements, and (6) cattle disease inspection (Rs. 950, Rs. 100, and Rs. 510, respectively), and an increase of Rs. 780 and 300 under the heads of experimental farm and district operations, respectively. The decrease under items 1 and 3 are due to the abolition of the Farm from 1st September last, but under the head of experimental farm it has been found necessary to make provision for the upkeep of the live stock until they can be satisfactorily disposed of. The decrease would have been greater but for the increased provision made for increase in the pay of Mr. Mills (Rs. 1,335) and for models for the London Exhibition (Rs. 400).

5. The charges for the ensuing year are estimated at Rs. 62,000 and consist of the following items :—(1) the pay and travelling allowance of the Assistant Director and his establishment, Rs. 13,300 ; (2) charges connected with improvement of agriculture and trade, ploughing competitions and exhibition of improved ploughs and machines, Rs. 5,700 ; and (3) cattle disease inspection, Rs. 43,000. The increased provision made by the Director under item 2 is explained in paragraph 6 of his letter. There is a large increase under item 3 as compared with the revised estimate for the current year and the actuals of 1884-85, owing chiefly to provision having been made for the increase to the pay of Mr. Mills for the whole year and for the increments to the pay of the local cattle disease inspectors. Government have not yet decided what proportion of the pay of these latter officers should be debited to Local Funds.

6. The estimates are approved and submitted for the sanction of Government. No provision has been made for the pay of the tobacco curer referred to in G.O., dated 15th August 1885, No. 934, Revenue Department, and of the agricultural inspectors referred to in the Director's letter, printed in Board's Proceedings, dated 20th May 1885, No. 1490.

(A true Copy and Extract).

(Signed) F. A. NICHOLSON,
Acting Secretary.

To the Secretary to Government, Revenue Department,
with copies of letter and enclosures.
Copy to the Director of Revenue Settlement and Agriculture.
„ Accountant-General.

ORDER—dated 17th November 1885, No. 1282, Revenue.

Miscellaneous.

With the foregoing proceedings, the Board of Revenue submit the budget estimate of the Agricultural department for 1886-87 and the revised estimate for the current year.

2. *Receipts.*—The revised estimate of receipts for 1885-86 amounts to Rs. 2,400, excluding the usual grant of Rs. 2,000 for experimental purposes, and shows a decrease of Rs. 1,550 as compared with the original estimate, which is accounted for by the abolition of the Government farms from 1st September last. This amount is, however, exclusive of the contribution from the surplus pound funds for which the revised and budget estimates have not yet reached Government. The original estimate under this head was Rs. 26,990.

3. *Charges.*—The revised estimate of charges for the current year is fixed at Rs. 57,250, or Rs. 480 less than the estimate sanctioned in G.O., No. 978, dated 28th August 1885. The variations are small and are explained. The estimate is approved.

4. *Budget estimate*, 1886-87.—The charges for the ensuing year are estimated at Rs. 62,000 against Rs. 57,250, the revised estimate for the current year, and Rs. 54,791, the actuals of the past year. The estimates under agricultural services and cattle disease inspection provide for the sanctioned scale of establishments and their travelling allowances and contingent expenditure. As regards the latter item, viz., cattle disease inspection, the Government remarked, in reviewing the last budget, that in future, *i.e.*, from 1886-87, local funds will be expected to provide such proportion of the cost as may be determined by Government. As yet this has not been done and the question of the formation of the Civil Veterinary department and of charging a portion of the cost of that department to local and municipal funds is still under consideration. The amount provided on this account in the agricultural budget will be retained, for the present, subject to subsequent revision.

5. The provision under district operations shows an increase of Rs. 2,200 over the revised estimate for this year. A sum of Rs. 1,000 each is entered under exhibition of improved ploughs and ploughing competition, and Rs. 3,000 for improvement of agriculture and trade. The increased expenditure under these heads is considered necessary by the Director and is approved. It is, however, observed that under the last-mentioned item the actuals of 1884-85 amounted to only Rs. 357, and there is no information as to the actual expenditure under this head during the current year up to date. In future the actuals of the first five months and the probable expenditure of the remaining seven months should be furnished.

6. The establishments in connection with agricultural analysis referred to in paragraph 9 of the Director's letter have been sanctioned in G.O., dated 20th October 1885, No. 1171. The necessary provision on this account, viz., Rs. 8,100, will now be added to the budget estimate, as well as a sum of Rs. 4,500 on account of the veterinary hospital buildings. Proposals for their erection were approved in G.O., No. 1044, dated 14th September 1885, and detailed plans and estimates have been called for. Pending the submission of these, the amount (Rs. 4,500) will, for the present, be entered in the budget.

7. The estimate of charges will thus amount to Rs. 74,600.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Accountant-General.
,, the Financial Department.
,, the Educational ,,

Exd. A. Aubert.

100 Copies.

No 12

Communicated to the
Assistant Director of Agriculture
and the Inspector of Cattle
Diseases

(By order)

First Assistant

Deptt of Rev: Settt & agre
adras, dated, 4 ~~Decr~~ January 1886

To

The Asst. Director of agre
" Inspector of Cattle Diseases.

Copy to the Dy: Director with
Dar E

Govt. of {1885} Madra

REVENUE.

Issued

Recd. Encl

G.O., 17th November 1885, No. 1282.

NOVEMBER.

Budget Estimate of Agricultural Department

for 1886-87, reviewed.

RECEIVED
11 JAN '6

23rd November 1885, No. 1303, Revenue.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following letter from J. F. PRICE, Esq., Director of Revenue Settlement and Agriculture, to the Acting Secretary to Government, Revenue Department, dated Madras, 1st October 1885 :—

Adverting to your demi-official No. 113, dated 15th July 1885, I send 50 copies of the notice. If more are required they are available.

Enclosure.

Memorandum comprising Extracts from various sources relating to the Medicinal uses and virtues of the Eucalyptus.

Extract from *Burgoyne, Burbidges and Co.'s Circular.*

The oil of *Eucalyptus globulus*, as a substitute for carbolic acid, has been much advocated of late. It is a most valuable antiseptic and has obtained the happiest results in bronchial catarrh. Professor Lister is of opinion that the *Eucalyptus globulus* should supersede carbolic acid as an antiseptic because of its harmless nature.

Extract from *Companion to the British Pharmacopæia.*

Liquid extract of *Eucalyptus* gum 1 part, water 2 parts : dissolve and strain. An excellent remedy in arresting bleeding from the nose. Lint dipped in it checks bleeding from wounds. The gum is used in doses of 5 grains every four hours in diarrhœa and dysentery. The oil is obtained from the leaves by distillation.

Extract from *Medical Times and Gazette*, 1882.

The oil of *Eucalyptus globulus* is said to diminish the action of the heart and the blood pressure and to act as a stimulant, astringent, and antiseptic on mucous membranes. Dr. Currier speaks highly of its use as a disinfectant and antiseptic in chronic ovaritis and tumours of the breast, in removing the fætor of the discharges and relieving the pain and discomfort.

Extract from *Export Prices Current and Trade Report.*

The leaves of several of the species of *Eucalyptus* when duly prepared and compounded into an ointment are found to possess healing properties, which, without exaggeration, may be termed remarkable. Josephson's ointment is the property of Messrs. E. Row and Co. of New South Wales. In the colonies it has achieved, we believe, considerable success in the treatment of wounds, &c.

Extract from *Australian Medical Gazette.*

[Being an article by JOHN MURRAY GIBBES, M.B. and C.M., (Aberdeen), M.R.C.S.E., Coroner of New Zealand, with reference to a severe epidemic outbreak of diphtheria.]

First.—After swabbing the throat with liq. fer. perchl. dil. and glycerine.

Second.—Pour boiling water on blue-gum leaves and let the steam be inhaled day and night. Drawing steam through an inhaler, or holding the head over a jug, is a most wearisome process, and you find that patients, especially children, soon get tired of it ; so I order the pan, jar or jug containing the infusion to be placed on a chair beside the bed, and a tent of the bed-clothes to be placed over it and the patient's head. This conveys the steam to the patient without exhausting him. Children soon feel the soothing effect, all uneasiness and pain in the throat leaving. Of course in mild cases the steam does not require to be used so often. In several cases, after 5 or 6 hours' steaming, complete casts of the air-passage were coughed up, and the breathing became easy at once. One young lady, tapping the upper part of her sternum, said, "It is here." She could not swallow a tea-spoonful of water ! Her lips were blue and her face of a dusky hue ; but after hours of steaming the membrane was coughed up, and the breathing became at once easy. In *one* case, where steaming was *not* carried out, the little patient was semi-asphyxiated for three days before death put an end to her sufferings. It was the first case of this epidemic that I saw, and was not able to sufficiently impress the attendants with the importance of the constant use of this steam. In blue-gum steam we have a most perfect disinfectant, as in no single case, after the first twenty-four hours, was the breath unpleasant and the swelling in the neck quickly subsided. Towards eight o'clock the diphtheria patients generally became feverish, restless and unable to sleep, and it was wonderful to watch the soothing effects of the steam. A bucket was generally placed in the room containing the blue-gum water, and a red-hot poker placed in it, which at once filled the room with steam, and very shortly after one child after another would fall asleep. Twenty-four cases were treated as above, with the death of only one infant, aged eight months. There were six other children ill in the same family, and not one case of paralysis has occurred amongst them, although two treated with sulphur by their parents are badly affected. I think that I can claim for the above treatment—

1st.—Great simplicity.
2nd.—That it follows nature's own method of getting rid of the membrane, namely, by suppuration.
3rd.—That it prevents paralysis from following.
4th.—That it cures the severest cases.

Extract from *The Sydney Mail.*

[Substance of a letter from DR. ROSS, M.D.]

I am forced, from careful observation and long experience of bush life, to believe that the majority of our gum trees, no matter in what form used, whether in the shape of their leaves in their natural state, or dried, in ointment, powder, decoction, gum, extract, oil or alkaloid, all inherit virtues. Time alone is bound to bring them into more general repute as an invaluable antiseptic and agent for counteracting lethal or poisonous exhalations; a cooling, healing application to wounds and ulcers, or rheumatism, and a salutary remedy in parasitic disorders in sheep. I shall now submit the following short extract of a remarkable *spear* wound case:—On the 28th December 1864 I found the abdominal wound wide open and gaping and the bowels protruding, accompanied by a quantity of ichorous serum oozing from the large orifice. Had taken no medicine. His gin, sitting by his side, in the bough gunyah, attentively bathed the wound and swollen abdomen with a few of the most tender shoots and leaves of the red-gum tree, steeped from time to time in hot-water. In consequence of the untoward appearance of the wound all chances of his recovery seemed now to have been quite taken out of my hands, for to attempt to close the wound, under the circumstances, would not only have been perfectly futile, but have added to the danger as the swelling was rapidly increasing, so much so that the case appeared quite hopeless and the pulse was sinking. On returning in the evening I found to my great surprise and astonishment that what I had considered to be a useless and cruel sort of application had not only lessened the size of the wound, but had positively had the effect of reducing the swelling. Seeing such results, of course I could make no further objection to the use of this strange application in the shape of gum-tree leaves, and the sixth day found the abdominal wound closed!

Extracts from *Extra Pharmacopœia*, 1884.

Eucalyptus foliæ (Eucalyptus leaves).—Dose 5 grains, or more, in powder.

The dried leaves of the *Eucalyptus globulus*, or blue-gum tree of Australia, have been employed medicinally in the treatment of ague and bronchitis, and are now much used in Italy for Roman and malarious fevers; also, when coarsely powdered, are employed for smoking in cigarettes in cardiac and aneurismal asthma. The narrow leaves, mostly scimitar-shaped, are more active medicinally than the broad leaves of herbaceous shoots.

Oleum Eucalypti.—Dose 1 to 5 minims emulsified with olive oil. Is distilled from the leaves of the *Eucalyptus amygdalinæ* and also from those of the *Eucalyptus globulus* and probably from other species. It is to this oil, and also especially to the great avidity for water which this tree has when growing, that it owes its antimalarial influence. The oil is a powerful antiseptic and has an ozonizing influence on the atmosphere while it oxidises. It has a pale yellow color, a penetrating, camphoraceous odour, sp. gr. about 0·900, and boils between 338° and 392° (Fahr.). It is not caustic like carbolic acid, nor does it produce much irritation, although it is very destructive to low organic growths. It is soluble in oils, fats, paraffins, and alcohol, but only a trace dissolves in water. The oil is useful (mixed with an equal quantity of olive oil) as a rubefacient for rheumatism. A large percentage of *Eucalyptus* oil consists of "*Eucalyptol*," which is also met with in commerce and is that part of the above oil which passes over between 338° and 352° F. It is obtained by treating the latter with caustic potax, then with chloride of calcium, and subsequent distillation.

Extract from *The Australasian.*

Baron Von Mueller has been at the pains of collecting and collating testimony from the scientific publications of many countries, and he cites recorded cases resting on the authority of practitioners of eminence to show that *Eucalyptus* oil possesses almost unique virtues as an antiseptic, as an agent for the reduction of the pulse in phthisis and typhus, for the diminution of bronchial catarrh, for combating incipient or threatened gangrene, and for healing certain ulcers. Dr. Wooster of San Francisco enumerates 129 cases of various diseases, 96 of which were cured by the administration of the fluid extract of *Eucalyptus* foliage. In 23 cases of remittent, intermittent and typhoid fever, every one yielded to the treatment. The American Faculty are using the extract largely in cases of diptheria and scarlatina with the most gratifying results; and in severe cases of cystisis, it has effected cures when all ordinary remedies had failed. In the practice of a single physician in New York, 100 diphtheritic cases have been successfully treated by the fluid extract. *Eucalyptus* inhalations, it has been found, are capable of overcoming catarrhal asthma and hooping-cough and of arresting pulmonary consumption.

Extract from *Pharm. Zeitung.*

Rodolfo Rodolfi recommends, from personal experience, the chewing of two to three dried leaves of *Eucalyptus globulus* as a sovereign remdy for cold in the head and coryza, provided they are recent and not chronic. The effect generally makes itself felt in half an hour.

Other uses of Eucalyptus Oil not medicinal.

Extract from *The Indian Agriculturist.*

A process has been invented in America for the manufacture of a preparation of the gum of the "*Eucalyptus globulus.*" It has the effect of removing thoroughly the *scales* which form in engine-boilers, and thus prevents rust and pitting. The result of the introduction of this preparation has been so great as to create an immense demand for it both in America and Europe. The effect of this preparation in preventing the pitting and corrosion of boilers will, it is expected, extend the period of their usefulness 100 to 150 per cent., and at the same time effect a great saving in fuel, as scale is a non-conductor of heat, and therefore more fuel is required to generate steam in old boilers than in new clean boilers.

Extract from *a letter from the Director, Government Cinchona Plantations, Parks and Gardens.*

"The leaves of many of the *Eucalypti* yield very good oils, and few are more valuable than that obtainable from the "*Eucalyptus globulus.*" The way to extract the oil is as follows:—Fill a large still with the macerated crushed leaves, and water and distil at a low temperature. Shake up the product with a little salt (this causes the oil to separate more rapidly from the water which comes over with it from the still), decant the oil from the water and filter through the paper. The leaves should be macerated for twenty-four hours and then mashed up. This process facilitates the extraction of the oil by breaking down the cells which surround the glands that contain it.

Order—dated 23rd November 1885, No. 1303.

Miscellaneous.

The memorandum will be placed on the Editors' Table.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Editor's Table.

Exd. W. H. French.

100 Copies.

Govt. of (1885) Madras

REVENUE.

No. 6

Communicated to the Officers in charge of Settlement
s and to the Inspector of Cattle Diseases.

pt. of Revenue Settlement
and Agriculture,
dras, ~~December 1885.~~
4 January 1886

(By Order)

First Assistant.

the Deputy Director of Revenue Settlement Party No II
,, Special Assistant Collector, Nilgiris and Malabar.
,, Inspector of Cattle Diseases.

Issued

Recd. *Encl.*

G.O., 23rd November 1885, No. 1303

NOVEMBER.

Eucalyptus.

Memorandum regarding the medicinal use and virtues of the —, ordered to be laid on the Editor's Table.

RECEIVED
11 JAN 86

CU

Regd.

26th November 1885, No. 1313, Revenue.

-159-

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following G.O., dated 13th August 1885, Mis. No. 1196, Financial:—

Read—the following letter from D. BARBOUR, Esq., Secretary to the Government of India, Department of Finance and Commerce, to the Chief Secretary to the Government of Madras, dated Simla, 28th July 1885, No. 2177:—

I am directed to acknowledge the receipt of your letter No. 779 (Miscellaneous), dated the 20th April, giving cover to the proceedings of His Excellency the Governor in Council of the 25th March, No. 369 (Revenue), regarding the revision of revenue establishments in the Madras Presidency.

2. The proposals now submitted would, if sanctioned, involve an annual increase of expenditure of Rs. 4,14,772, or Rs. 54,800 less than those originally placed before the Government of India in your letter, No. 2588, dated the 10th November 1884. To those proposals as a whole the Governor-General in Council was unable on financial grounds to assent, and the Government of Madras was requested to reconsider the scheme with the view of reducing its cost within such limits as would justify the Government of India in submitting it to the Secretary of State for India in Council. Two subjects were suggested as suitable for reconsideration: first, the possibility of introducing the scheme more gradually than was proposed; and, second, the desirability of improving the efficiency of the village establishments.

3. The Government of Madras have explained in the proceedings above quoted how far they are able to meet the wishes of the Government of India on these two points, and His Excellency in Council is pleased to approve of the scheme now brought forward if, in connection with the latter of the two subjects, further information can be supplied in regard to one point to which the Government of India attaches great importance, and which it would wish fully considered before it can accord its complete approval of the proposed expenditure. The point is that the scheme does not provide with sufficient distinctness for raising the karnam staff to an educational level which will ensure their being eventually competent to conduct, under the supervision of the revenue inspectors, the annual or periodical surveys of their villages. It is inferred that the employment of a special survey agency might always be required for the correction of village maps. But the policy of requiring the ordinary work of field plotting and of filling in the skeleton or traverse blocks of a professional survey to be done by village agency is one which has been accepted throughout the greater part of India, and has been specially held in view by His Excellency the Governor-General in Council in the organization of Agricultural Departments, which were intended to secure, through the agency of the village officials and their supervisors, the results hitherto obtained by special survey and settlement establishments. In advocating the adoption of this course, the Government of India has at no time had the intention of advising that survey of extensive areas hitherto unsurveyed should be undertaken by, or imposed on, the village staff. It has only contemplated that the local officials should be made competent to survey and prepare the record of annual extensions of cultivated areas, or of alterations in the disposition of fields and minor topographical features within the village boundaries.

4. So far as can be ascertained from the papers before the Government of India, there is reason to believe that the karnams are in this respect inefficient, that they are as a rule unable to conduct even the simplest operations of field survey, and that if the hereditary principle is maintained, without reference to educational qualifications, there is little hope of their becoming uniformly competent to perform such work. But the question does not seem to have met with full consideration, whether the present inability of the karnams to survey need prevent the introduction of a scheme under

which the revisions of village maps should be ultimately undertaken by the village staff under the supervision of revenue inspectors. The Government of India admits that it may take some few years to effect the necessary reform and education of the karnam staff, and to secure the elimination of incompetent members of hereditary families who may prove unable to acquire the simple knowledge of survey necessary for field plotting, and it would therefore offer no objection on financial grounds to the introduction during such period of the scheme in the form in which it has been sketched in your letter of the 20th April. But His Excellency the Governor-General in Council feels it necessary to point out that if the eventual efficiency of the village officers in respect to survey be not made an essential part of the scheme, the Government of India will be placed in the position of having accorded sanction to expenditure both on an Agricultural Department and on improved village establishments without, at the same time, having secured the future elimination of special survey operations, to effect which has been one of its main objects in promoting both the establishment of Agricultural Departments and the improvement of the subordinate village staff throughout India.

5. In asking for an assurance that the eventual competence of village officials to perform the ordinary operations of a village survey will be made an essential feature of the proposed reforms, the Government of India presumes that it is needless to touch upon the question of the ability of revenue inspectors to supervise survey operations. It is observed that these officers will be required to pass an examination in elementary survey, which, it is presumed, will ensure their competence to superintend the village officers, and will at the same time necessitate the gradual introduction of the scheme, if, as is understood, increase of salary will only be given to those who have not failed to pass the proposed tests.

6. I am to state, in conclusion, that in all other respects the scheme set forth in the order of the Madras Government, No. 369, dated 25th March 1885, meets with the full concurrence of the Government of India.

No.

Copy, with copy of the letter noted in the margin, forwarded to the Revenue and Agricultural Department for information, in continuation of No. 129, dated the 10th January 1885.

No. 779, dated 20th April 1885, and enclosure.

(By Order.)

(Signed) F. J. FINLAY,
Offg. Under-Secy. to the Govt. of India.

Order—dated 13th August 1885, Mis. No. 1196, Financial.

Communicated to the Revenue Department.

(True Extract.)

(Signed) M. HAMMICK,
Acting Under Secretary.

To the Revenue Department.
,, the Accountant-General.

ORDER—dated 26th November 1885, No. 1313, Revenue.

Miscellaneous.

In the letter read in the proceedings quoted above, the Government of India has approved, generally, of the revised scheme for the reorganization of the subordinate revenue establishments of this presidency, submitted in the letter of this Government, No. 779, dated 20th April last, but has stated that, before it can accord its complete approval of the proposed expenditure, further information should be supplied on the question of raising the karnam staff to an educational level, which will ensure their being eventually competent to conduct, under the supervision of the revenue inspectors, the annual or periodical surveys of their villages.

2. Although the question of the efficiency of the karnam staff, which is a purely *village* organization, does not appear to this Government to have any bearing upon that of the insufficiency or otherwise of the higher and altogether separate staff necessary for the proper working of district and taluk offices, they are most desirous, in every possible way that circumstances and the difference which, apparently, exists between the constitution of village establishments in Northern and Southern India, will permit, to forward the wishes of the Government of India touching improvement in the education of karnams.

3. The hereditary principle, as regards succession to village offices, is, it is to be remembered, one which has existed in almost every part of the presidency from remote times and is therefore an institution which cannot be overlooked. Government, however, not without foreseeing considerable difficulties, are prepared to announce that, after a period, say, of three or four years from this time, no karnam shall be appointed to office who has not passed such educational test, including surveying, as the Government may consider sufficient, preference being given, in the case of candidates possessing the necessary qualifications, to the individual who has a proved hereditary claim to the office. The standard to be fixed must, at first, necessarily be somewhat lower than that which the Government of India would seem to consider requisite, but it is hoped that this may eventually be reached, although the small salaries which village officers receive, and which, in the case of karnams, vary from Rs. 5 to Rs. 20 per mensem, and of an increase in which there is little or no prospect, will probably be but a small incentive, even to the hereditary class, to undergo the cost and trouble of the necessary education, and will be none to outsiders.

4. With reference to the special education of revenue inspectors, who form no part of the *village* establishment, Government have already ruled that, after the 1st April 1888, no person who shall not have passed the survey test fixed by them shall be eligible for appointment as a revenue inspector, or for promotion to the new rates of pay or to a higher grade. This, Government trust, will sufficiently meet the views of the Government of India on that point.

5. Ordered that the Government of India be addressed.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Superintendent, Revenue Survey.
,, the Financial Department.
,, the Educational Department.

Exd. W. H ch.

120 Copies.

Govt. of {1885} Madras.

REVENUE.

No. 5

Communicated to the Officers in charge of Settlement
ties and to the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 4 ~~*December*~~ 188~~5~~6.
January

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No III
" " Special Assistant Collector, Nilgiris and Malabar.
" " Inspector of Cattle Diseases.

Issued

Recd.

Encl.

G.O., 26th November 1885, No. 1313

NOVEMBER.

Education [illegible]arnams.

Passing orders on letter from the Governn
of India regarding — in this presidency.

RECEIVED
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C4

3rd December 1885, No. 1338, Revenue.

16-

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Season Reports for the Week ending 28th November 1885.

Read—the following Telegram from Collector of Ganjam, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 13·45, ragi 27·71, cholum 22·24, cumbu 30·1. No rain; three rain-gauges removed; none yet restored. Cholera deaths 29; cow-pox slightly exists in Berhampore and Narsannapet taluks. Irrigated paddy ripening.

Read—the following Telegram from Collector of Vizagapatam, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 13·2, cholum 20·2, ragi 28·5, cumbu 29·7. Small-pox seven taluks; fever six; cattle-disease slight in Gajapatinagar, Pálkonda taluks; particulars not received; called for. In Anakápalle, Vizianagrum, Pálkonda, Párvatipur taluks crops good; in Golgonda, Sarvasiddhi, Vizagapatam paddy suffering from blight, elsewhere standing crops fair; chama, arika harvested in Chípurupalle, outturn half; paddy harvested in Párvatipur, outturn five-eighths; black-paddy sown in Srungavarapukóta, ragi Bimlipatam, green-gram, indigo, Pálkonda. Water-supply sufficient. Rainfall below average by 0·2 inches; no fear distress; no rain fifteen stations; gauges from Bobbili, Gajapatinagar, Gúdem, Srungavarapukóta, Kotipad, Malkangiri, Naurangapur withdrawn 1st April; Paderu, Pottungi, 8th April; Gunipur, 17th March.

Read—the following Telegram from Collector of Godávari, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 14·33, cholum 25·86, ragi 31·25, cumbu 31·33. Fever and small-pox slight; cholera 51 deaths six taluks; no cattle-disease. Standing crops generally good; paddy being harvested in some taluks, outturn $\frac{3}{4}$; tobacco being transplanted. Godávari water 8·40 feet above lock-sill. Rainfall to date is above average; Alamúr, Kottapeta withdrawn 2nd and 26th April, respectively; not restored.

Read—the following Telegram from Collector of Kistna, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 12·88, cholum 21·6, ragi 27·03, cumbu 23·25. No rain; rainfall 1st January to date 29·64 against average last three years 36·78. Varagu, tobacco, pulses sown; standing crops generally good. Fever, small-pox and guinea-worm slightly exist; cholera prevailed in Répalle, Guntúr and Bandar taluks; unreported last week, attacks 3, deaths 2; this week 13 and 7; cattle, condition good. 1·85 feet water over anicut.

Read—the following Telegram from Collector of Nellore, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 14·33, cholum 25·23, ragi 31·77, cumbu 28·91. Health generally good; small-pox in Nellore, Ongole, Kandukúr; fever in Udayagiri, Kanigiri; rinderpest impaction of the omasum in Nellore, Kandukúr, deaths 15. Crops standing fair; cumbu being harvested in Ongole, outturn 10 annas. Agricultural operations—Kesari-paddy, cholum, ragi, korra, horse-gram being sown. Water-supply sufficient.

Read—the following Report from Collector of Cuddapah, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Average of the district—Rice 13·61, cholum 29·61, ragi 34·42, cumbu 30·75. Health good in Jammalamadugu, Proddutur, Sidhout and Pulivendla taluks; a few cases of small-pox reported in some villages of Madanapalle taluk and of fever in some places of other taluks; in one village of Badvél taluk 20 out of 70 cattle died from saraku and galikuntu (epizootic aphtha) and from a disease called jabbavapu (swelling of thighs) in Vontimitta of Sidhout taluk; in others good. Crops good, but cholum in some places of Cuddapah taluk reported suffering from blight; the following crops harvested, outturn reported to be on the average—korra $\frac{5}{8}$, arika $\frac{3}{4}$, indigo $\frac{3}{4}$, paddy $\frac{3}{4}$, cumbu $\frac{1}{2}$ and ragi $\frac{5}{8}$. Agricultural operations—Clearing channels; sowing ragi, horse-gram, bengal-gram and wheat in some places and in others preparing lands for sowing paddy, ragi and cholum; harvesting ragi, and weeding. Water-supply—Some tanks in Cuddapah, Pullampet and Váyalpád taluks contain full supply, and others in the district partial supply; river and spring channels and wells contain good supply; want of water felt in few tanks Cuddapah taluk. Rainfall *nil.*

Read—the following Telegram from Collector of Bellary, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 12·72, white-cholum 25·59, yellow-cholum 28·23, ragi 29·73, cumbu 25·30. Rainfall *nil.* Health generally good; three deaths Adóni taluk from cholera. Sowing bengal-gram, white-cholum, wheat; early dry crops much improved; later sowings thriving in parts of Hadagalli and Harpanahalli; white-cholum crop is attacked with disease; castor seeds and pulses eaten by caterpillars at Harpanahalli; wet crops good; harvesting paddy, yield average; cholum, ragi, cumbu, gingelly, korra, green-gram and other pulses, yield average in part, and below average in others. Prospects continue favorable.

Read—the following Telegram from Collector of Anantapur, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 13·77, cholum 28·58, ragi 34·19, cumbu 28·36. Health generally good; fever in parts of Uravakonda division, and small-pox in two villages Dharmavaram taluk; cattle-disease one village Gooty, Hindupur taluks; sheep-pox in former, deaths 50, attacks not given; malignant sore-throat in latter, two attacks, one death. Pasture procurable. Standing wet and dry crops generally fair; cholum attacked by blight in parts of Tadpatri taluk; cholum, bengal-gram, paddy, ragi, coriander, wheat are being sown in parts of five taluks; ploughing in two taluks; cholum, ragi, cumbu, oil-seed, green-gram, korra, arikalu, indigo, chama and ground-nuts being harvested in parts of six taluks, outturn Anantapur, Gooty between eight and twelve annas; Dharmavaram, Madakasíra eight annas; Hindupur between four and twelve annas; Tadpatri generally full. Water-supply fair throughout. Rainfall *nil* during the week; 1·07 inches above average.

Read—the following Telegram from Collector of Kurnool, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

District average—Rice 12·57, cholum 30·04, ragi 31·35, cumbu 30·27. No rain. Standing crops fair; horse-gram and bengal-gram still being sown; early cereals and paddy being harvested, yield half to three-fourths; want of water felt for paddy crops under canal owing to breach of anicut. Small-pox in two taluks; cattle-disease, dysentery and foot-disease in two taluks. Pasture and water sufficient. Prices—Cumbu rising in one taluk; other articles stationary. Deaths from cholera 2.

READ—the following Report from Collector of Madras, to Secretary to Government, Revenue Department, dated 30th November 1885:—

Rice (second sort) 12·08, cholum 16·41, cumbu 17·16, ragi 21·92. Health—Fever prevalent; no cholera; cattle healthy. Imports—Tons, rice *nil*; other grains 296. Rainfall *nil*.

READ—the following Report from Collector of Chingleput, to Secretary to Government, Revenue Department, dated 30th November 1885:—

Rice 13·87, ragi 26·44, cumbu 18·81, cholum 17·20. Health of people generally good; cholera in one village in Saidápet taluk, attacks 7, deaths 3; cattle good in Conjeeveram and Ponnéri; anthrax in Madurántakam and Saidápet; malignant sore-throat in Chingleput; dropsy in Tiruvallúr and Saidápet, and rinderpest in Saidápet and Madurántakam, attacks 52, deaths 38. Crops generally good; slightly damaged by rain in parts of Saidápet and Ponnéri; kar is harvested in parts of Tiruvallúr and Conjeeveram, average half. Pasturage good. Agricultural operations—Ploughing for, sowing and transplanting samba; sowing kar in Tiruvallúr and ragi in Ponnéri; weeding in Tiruvallúr and Ponnéri. Water-supply sufficient. Rainfall—Saidápet 0·10, other stations *nil*; all but Sríperumbudúr and Ootramallur reported. Prospects fair.

READ—the following Report from Collector of North Arcot, to Secretary to Government, Revenue Department, dated 30th November 1885:—

Rice 14·8, cholum 25·2, ragi 29·8, cumbu 26·0. Health—Fever prevails in the Chittoor and Palmanér taluks and Punganúr, Tirupati and Venkatagirikóta divisions, and small-pox in Punganúr division; 10 attacks of cattle and 2 deaths from rinderpest were reported. The standing crops are reported to be generally in good condition; paddy, ragi and indigo were harvested during the week to a limited extent, and the yield was below the average. Agricultural operations are progressing except in the Kangundi and Punganúr divisions, where they are reported to be limited. Water-supply—Tanks have generally received from one to six months' supply except in the Palmanér and Gudiyátam taluks and Kangundi division where the supply is scanty. Rainfall—No rain fell during the week; the average rainfall up to date since January 1885 is 28·25 against 37·10 inches, the average of the past four years; more rain is needed.

READ—the following Report from Collector of South Arcot, to Secretary to Government, Revenue Department, dated 30th November 1885:—

Rice 14·22, cholum 27·72, ragi 31·60, cumbu 32·15.

Average price of cholum arrived at for past and previous weeks—

	Past week.	Previous week.
Tiruvannámalai	30·24	30·24
Chidambaram	25·20	25·20
Total ...	55·44	55·44
Average ...	27·72	27·72

Generally healthy; fever prevailed in parts of Tindivanam and Vriddháchalam taluks, and small-pox in parts of Tindivanam, Villupuram and Vriddháchalam taluks; cattle were generally healthy, but they suffered from anthrax (அடைப்பான்) in parts of Villupuram and Tiruvannámalai taluks, and the number of deaths reported during the week was 11, *i.e.*, 8 in the former taluk and 3 in the latter against 4 attacks; the number attacked in the Villupuram taluk has not been reported by the Tahsildar, to whom a strict order has been sent to show invariably the number of attacks in his future reports. The standing crops, viz., millet, ragi, varagu, cholum, horse-gram, ground-nut and gingelly in dry lands as well as sugar-cane and paddy in wet lands were generally good; but it is reported that ground-nut is affected by insects in parts of Villupuram taluk, and paddy crops suffered to some extent from disease called "Anaikkombu" (ஆனைக்கொம்பு) in parts of Tindivanam taluk; also the heavy rain and freshes in the previous week in Chidambaram taluk have slightly damaged the crops here and there; ragi and varagu were harvested in parts of Tindivanam taluk and yielded 6 to 12 annas and 8 to 12 annas respectively; kar-paddy was harvested in parts of Vriddháchalam taluk, and the outturn was 8 annas. Agricultural operations—Ploughing, manuring and weeding operations were in progress in parts of the district; ragi, horse-gram and paddy were sown in parts of the district; paddy was also transplanted in some places. Water-supply generally good. Rainfall *nil*; reports from Panruti, Bhuvanagiri, Kallakurchi and Ulundurpet not received; rainfall at Tindivanam and Merkanam for previous week was 8·75 and 16·95 inches respectively; rainfall up to date from 1st January 1885, 38·62; average rainfall in three previous years 40·83; the average is given for all seventeen stations at which rain-gauges were retained, while the rainfall up to date in the current year is entered only for nine stations at which the gauges have been retained throughout the year; rain-gauges of eight stations withdrawn under Board's Proceedings, No. 604, dated 23rd February 1885, have been restored as specified below:—

	Date of withdrawal	Date of restoration.
Panruti	17th March 1885.	19th November 1885.
Ulundurpet ...	21st ,, ,,	20th ,, ,,
Chengam	27th ,, ,,	21st ,, ,,
Titagudi	22nd ,, ,,	21st ,, ,,
Gingee	23rd ,, ,,	22nd ,, ,,
Vanur	18th ,, ,,	22nd ,, ,,
Mannárgudi ...	18th ,, ,,	23rd ,, ,,
Bhuvanagiri ...	31st ,, ,,	24th ,, ,,

Read—the following Telegram from Collector of Tanjore, to Secretary to Government, Revenue Department, dated 30th November 1885:—

Rice 14·06, cholum 24·36, ragi 27·01, cumbu 23·08. Rainfall—No rain in sixteen stations; report not received from Arantangi; rainfall above average; no prospect of distress at present, but more rain necessary. Rivers 1 to 9 feet, gradually falling. Crops generally good; improving in parts damaged by the late rain and floods. Harvest—paddy, cholum, ragi, outturn below average. Health of people and cattle generally good.

Read—the following Report from Collector of Trichinopoly, to Secretary to Government, Revenue Department, dated 30th November 1885:—

Rice (second sort) 13·00, cholum 21·00, ragi 28·51, cumbu 25·33. The Kulitalai season report not having been received, the prices of the station for the last week have been adopted. Health very good; no cholera; two cases of small-pox in Udayárpálaiyam taluk which have proved fatal; two cases of cattle-disease in the district, of which one died; two cases of small-pox under treatment in Pudukóta. Crops good. Agricultural operations—Paddy, ragi, cumbu, cotton, horse-gram sown; second-crop paddy transplanted in parts of three taluks; kar-paddy harvested with outturn ranging from 8 to 12 annas. Water-supply—The Cauvery has gone down a foot 4 inches this week; supply in river-channels consequently fallen; tanks in dry parts have from one to two months' supply. Rainfall *nil*; so also Pudukóta; rain-gauge of Ariyalúr restored on the 26th instant; the others have been restored on the dates mentioned in the last week's return.

Read—the following Telegram from Collector of Madura, to Secretary to Government, Revenue Department, dated 30th November 1885:—

Rice 12·88, cholum 23·22, ragi 23·1, cumbu 22·6. No rain; number of stations not reporting, eight; previous week Dindigul 1·4, Pámban 4·9, Mutukulatúr 2·35, Muturagunáthapatnam 4·57, Morekulam 4·87 ; remaining stations *nil* ; rainfall below average. Health of people and cattle generally good ; fever prevalent ; no cattle-disease. Water-supply sufficient. Pasture fair.

READ—the following Telegram from Collector of Tinnevelly, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 13·43, cholum 20·15, cumbu 18·71, ragi 24·25. Rainfall—Srívilliputur 0·4, Tuticorin 0·1, other stations *nil* ; rainfall since January 20·96 inches against 23·84, average ; more rain wanted. Agricultural operations progressing. Health good ; 5 attacks and 5 deaths among cattle from rinderpest in Tinnevelly. Dry crops damaged in parts of Nánguneri by insects called musukutti.

READ—the following Report from Collector of Coimbatore, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 13·44, cholum 20·41, ragi 25·26, cumbu 23·99. Slight fever and slight small-pox in two taluks, and slight dysentery in one taluk. Paddy good in eight taluks, and want rain in Coimbatore and Kollegál ; cholum under wells good in five taluks ; cholum in punjah good in eight taluks and want rain in Coimbatore ; ragi under wells good ; ragi in punjah good in two taluks and want rain in Coimbatore and Kollegál ; cumbu in punjah good, want rain in Coimbatore ; harvesting paddy in six taluks, outturn average in Dhárápuram, above average in Erode, Karúr, Polláchi and Udamalpet, and below average in Palladam ; cholum in punjah in two taluks, outturn average in Karúr and below average in Bhavání ; ragi in nunjah in Udamalpet, outturn average ; ragi under wells in five taluks, outturn average in Coimbatore, Palladam and Udamalpet, and below average in Dhárápuram and Bhavání ; ragi in punjah in Polláchi, outturn above average ; cumbu under wells in Coimbatore, outturn average ; cumbu in punjah in Erode, Bhavání, Polláchi and Palladam, outturn average. Rain sixteen stations *nil* ; the rainfall of the district is now again below average ; Coimbatore and Kollegál are the taluks where want of rain is most felt. Prospects are still fair and would be much improved by rain.

READ—the following Telegram from Collector of Nílgiris, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 10·5, cholum 16·0, ragi 20·8, cumbu 17·6. Health good. Crops good ; second crop being harvested ; ploughing for next year. Water sufficient. Rain *nil* throughout district ; Gúdalúr report not received ; this report therefore relates rest of district.

READ—the following Report from Collector of Salem, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 14·35, ragi 29·13, cumbu 25·33, cholum 23·55. Crops in good condition ; punjah crops are affected by insects in parts of three taluks ; paddy and ragi in five taluks, cumbu in one, and cholum in one, are being harvested, yield below the average. Rainfall not up to average. Agricultural operations—Paddy in five taluks and cholum in one are being sown. Health generally good, but fever in parts of two taluks ; cattle-disease in parts of three taluks—

Name of disease.	Number attacked.	Number died.
Foot and mouth disease	39	...
Dysentery	1	1
Fever	3	...

Water-supply sufficient for agricultural purposes except in three taluks. Rainfall *nil* ; last week Krishnagiri 1·85 and Pennagaram 1·68.

READ—the following Telegram from Collector of South Canara, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 14·57, ragi 22·97. Few cases of small-pox in three taluks; slight fever and measles in parts; foot-disease and diarrhœa among cattle in parts of three taluks. Second rice-crop cultivation completed in most parts; plants affected by insects in parts of Mangalore taluk. Water-supply sufficient. Rainfall *nil*.

READ—the following Telegram from Collector of Malabar, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Rice 12·83, ragi 22·94. Small-pox slight in five taluks; fever slight Wynaad and Wálawanád; cholera in Ernád and Wálawanád, 10 cases, 7 deaths. Harvesting of later first crop continues in Pálghat, outturn 14 annas; second-crop cultivation in fair condition. Cattle-disease in Ernád and Wálawanád, 10 attacks, chiefly of aphtha epizootica, two deaths. Pasture fair. No rain.

READ—the following Telegram from Dewan of Travancore, to Secretary to Government, Revenue Department, dated 30th November 1885 :—

Season telegram, Trivandrum. Paddy thriving. Price—Madras second-sort rice 9·6 and paddy 23·9 seers per rupee. Fever in some places. No rain.

ORDER—dated 3rd December 1885, No. 1338, Revenue.

Miscellaneous.	Communicated to the Board of Revenue.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Sanitary Commissioner for Madras.
,, the Chief Engineer for Irrigation.
,, the Surgeon-General with the Government of Madras.
,, the Financial Department.

Exd. W. H. French.

100 Copies.

Govt. of {1885} Madras.

REVENUE.

164

Issued

Recd. Encl.

G.O., 3rd December 1885, No. 1338.

DECEMBER.

Season.

Reports on the state of — for week ending 28th November 1885, communicated to the Board of Revenue.

No. 15

Communicated to the Officers in charge of Settlement arties and to the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 4 ~~December~~ January 188~~5~~6

(By Order)

First Assistant.

o the Deputy Director of Revenue Settlement Party No III
„ „ Special Assistant Collector, Nilgiris and Malabar.
„ „ Inspector of Cattle Diseases.

RECEIVED
1 JAN '6

4TH DECEMBER 1885, No. 1343, REVENUE.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following Proceedings of the Board of Revenue, dated 20th November 1885, No. 3175 :—

Read—the following letter from Colonel H. T. ROGERS, R.E., Superintendent, Madras Survey, to the Secretary to the Board of Revenue, dated 22nd August 1885, No. 50-B :—

With reference to Resolution of the Board of Revenue, dated 14th August 1885, No. 2345, I have the honor to forward a copy of my letter to Government, dated 27th June 1885, No. 124-G, in reply to G.O., dated 15th May 1885, No. 2472.

2. I regret that I am unable to give any information as to whether the zemindari and inam lands which will come under the influence of the Rushikulya project form a part of the excluded muttahs referred to in the Government Order above quoted.

ENCLOSURE.

Letter from Colonel H. T. ROGERS, R.E., Superintendent, Madras Survey, to the Secretary to Government, Revenue Department, dated Ootacamund, 27th June 1885, No. 124-G.

With reference to G.O., dated 15th May 1885, No. 2472, I have the honor to inform you that demarcation and survey of the 10,000 acres or 16 square miles of wet land, which the Collector of Ganjam desires to have carried out before the opening of the Rushikulya works, will cost (including share of Central office charges) about Rs. 1,100 a square mile, or a total sum of about Rs. 17,600. This estimate is only approximate, because the exact character of the land and the degree of minuteness of the demarcation required are not known. The demarcation will be of course of a permanent character, and the work, if ordered, will be executed by No. I party now employed in the northern districts.

Read—the following letter from J. G. HORSFALL, Esq., Collector of Ganjam, to the Secretary to the Board of Revenue, dated Chatrapur, 16th September 1885, No. 3377 :—

Referring to paragraph 3 of Board's Proceedings, dated 14th August 1885, No. 2345, I have the honor to state that I adhere to the recommendation that I originally made that the excluded muttahs should be surveyed, an additional reason being the large forest reserves situated in them.

Reference on the above, dated 15th October 1885.

The Collector is requested to report distinctly (1) whether any part of the area irrigable under the Rushikulya project is situated within the excluded muttahs, (2) whether he desires the survey of these muttahs partly on that account.

(Signed) F. A. NICHOLSON,
Acting Secretary.

To the Collector of Ganjam, with Superintendent's letter
in original to be returned.

Read—the following G.O., dated 24th August 1885, Mis. No. 4443, Revenue :—

Read—Proceedings of the Board of Revenue, dated 18th July 1885, No. 2139.

ABSTRACT.—Submitting to Government letter from the Director of Revenue Settlement and Agriculture furnishing information called for regarding the survey of zemindari and inam lands in Ganjam district excluded in former survey.

Read—letter from the Superintendent, Madras Survey, dated 27th June 1885, No. 124-G.

Order—dated 24th August 1885, Mis. No. 4443, Revenue.

Recorded pending receipt of replies to paragraphs 2 and 3 of G.O., dated 8th August 1885, Mis. No. 4098.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Superintendent, Revenue Survey.

Read—the following letter from J. G. HORSFALL, Esq., Collector of Ganjam, to the Secretary to the Board of Revenue, dated Chatrapur, 2nd November 1885, No. 4125 :—

Adverting to the Board's reference, dated 15th ultimo, on General Register Nos. 4876 and 5365, I have the honor to reply that no part of the area irrigable under the Rushikulya project is situated within the excluded muttahs.

The survey of the excluded muttahs of Goomsur is desired not on that account, but for the reasons given in my letters noted in the margin.

1. No. 2885, dated 5th August 1884, read in Board's Proceedings, 29th idem, Mis. No. 8127.
2. No. 3377, dated 16th September 1885.

As the Rushikulya works are being proceeded with and claims have already arisen regarding interruption to existing irrigation sources, it is highly desirable that the survey work proposed by me should be taken in hand at once. In another year or two it will be a matter of difficulty to determine claims which might now be disposed of without doubt or difficulty.

Resolution—dated 20th November 1885, No. 3175.

The Collector has asked for the survey (1) of the lands which will be affected by the Rushikulya project, (2) of certain muttahs hitherto excluded from survey.

2. The Board strongly recommend the survey, at the earliest possible date, of the lands alluded to in the first request, in order to prevent future disputes and loss of revenue.

3. In favor of his second request, Mr. Horsfall urges that there is probably a large excess of actual over recorded cultivation, and that there are large forest reserves. In Board's Proceedings, No. 8127, dated 29th August 1884, the Board considered that no sufficient reason had been shown for re-opening a question that had been decided by G.O., No. 3222, dated 9th November 1877, and they are not of opinion that the existence of forest reserves materially alters the circumstances. They do not therefore recommend the survey of the unhealthy and jungly muttahs hitherto excluded.

(True Copies and Extract.)

(Signed) F. A. NICHOLSON,
Acting Secretary.

To the Secretary to Government, Revenue Department.

Copy to the Collector of Ganjam.
,, ,, Superintendent, Madras Survey.
,, ,, Director of Revenue Settlement and Agriculture.

ORDER—dated 4th December 1885, No. 1343, Revenue.

Miscellaneous.

The proposed survey is approved. It should embrace not only the *mamul* (usual) wet, but also other lands in those zemindari and inam villages which will come under the influence of the Rushikulya project when completed. A list of these furnished by the Collector and received with Board's Proceedings, No. 2139, dated 18th July 1885, is appended.

2. The Superintendent of Revenue Survey will submit proposals as to how effect can be given to the instructions now issued, and will furnish, at the same time, in communication with the Collector, if necessary, an estimate of the cost. The estimate furnished with his letter, No. 124-G, dated 27th June 1885, refers only to the usual wet area, estimated at 10,000 acres.

3. Government see no reason to modify their Order, No. 3222, dated 9th November 1877, regarding the survey of the excluded mittahs.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Superintendent of Revenue Survey.
,, the Accountant-General.
,, the Public Works Department, Irrigation Branch.
,, the Director of Revenue Settlement and Agriculture.

APPENDIX.

LIST showing the Zemindari and Inam Villages through which the Mahánadi and Rushikulya Canals run.

No.	Name of Village.	Remarks.
	Mahánadi Canal.	
1	Kotipalli	Inam.
2	Borapilly	Do.
3	Berlakampore	Do.
4	Ketribarpore	Do.
5	Umbadaly	Mokhasa or Inam.
6	Sodara	Inam.
7	Nundajola	Dhárákót Zemindari.
8	Bramapattiah	Do. do.
9	Goyethamarasasanam	Do. do.
10	Sansapore	Do. do.
11	Jahoda	Do. do.
	Rushikulya Canal.	
1	Damodarapilly	Dhárákót Zemindari.
2	Dhárákót	Do. do.
3	Coopuleso	Do. do.
4	Mandamuri	Do. do.
5	Saradapore	Do. do.
6	Coosarahoo	Do. do.
7	Booreguda	Do. do.
8	Bodaguda	Do. do.
9	Soonamoye	Do. do.
10	Botheguda	Do. do.
11	Paddenupuram	Sérgadá Zemindari.
12	Sérgadá	Do. do.
13	Sagoorapilly	Do. do.
14	Tekaroda	Do. do.
15	Calinghol	Do. do.
16	Kertipore	Do. do.
17	Croopasindapore	Do. do.
18	Streechendrapore	Pedda and China Kimedi Zemindaris.
19	Rámachandrapur	Do. do.
20	Putterpunja	Do. do.
21	Erandra	Do. do.
22	Woosta	Do. do.
23	Ambata	Do. do.
24	Sanspore	Do. do.
25	Titticundy	Do. do.
26	Puttundah	Do. do.
27	Kadaripore	Do. do.
28	Muttiapore	Do. do.
29	Gowthamy	Do. do.
30	Ambata	Do. do.
31	Dowlapada	Do. do.
32	Sunkalapally	Inam.
33	Ramapilly	Do.
34	Agraharam	Do.
35	Soondaraboda	Do.
36	Streeramachnadrapur	Do.

Exd. W. H. French.

120 Copies.

Govt. of {1885} Madras.

REVENUE.

Issued

Recd. *Encl.*

G.O., 4th December 1885, No. 1343.

DECEMBER.

Survey of Lands coming under t influence of the Rushikulya Proje

Proposal regarding —, approved with remar and the Superintendent of Revenue Su requested to forward proposals for giving ef to these orders and an estimate of the cost.

No. 3

ed to the Officers in charge of Settlement Parties.

e Settlement
iculture,
~~December~~ 1886.
January

(By Order)

First Assistant.

le by Director of Rev: Sett

no. 2 Party

RECEIVED
11 JAN 86

9TH DECEMBER 1885, NO. 1359, REVENUE.

Rev. S. No. 63

Cul

168

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following despatch from the Right Honorable Lord RANDOLPH S. CHURCHILL, Her Majesty's Secretary of State for India, to His Excellency the Right Honorable the Governor in Council, Fort St. George, dated India office, London, 12th November 1885, No. 25 (Revenue):—

Madras Assessments: Modification of the "Standard scale" and "Commutation prices."

I have to acknowledge the receipt of the letter of your Excellency's Government in this department, No. 3, dated 15th August last, reporting that as, on experience, the system of a standard scale of assessment which was approved in Lord Kimberley's Revenue despatch, No. 3, dated 25th January 1883, has not been found altogether satisfactory, you have determined that in future, whenever the settlement of any district is taken up, an independent scale of rates shall be worked out on the data supplied by other similarly situated districts. It is also further explained that in the present settlement in course of progress in Madura, as well as in all future cases, the commutation prices will be determined with reference to the average prices of the twenty non-famine years immediately preceding the settlement.

2. Your proceedings are approved.

ORDER—dated 9th December 1885, No. 1359, Revenue.

Land Revenue, No. 143.

Communicated to the Board of Revenue and the Director of Revenue Settlement and Agriculture.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
" the Director of Revenue Settlement and Agriculture.

Exd. J. Henricus.

80 Copies.

Govt. of {1885} Madras.

REVENUE.

No. 2

icated to the Officers in charge of Settlement
the Inspector of Cattle Diseases.

evenue Settlement
Agriculture,
4 ~~December~~ 1886.
January

(By Order)

First Assistant.

puty Director of Revenue Settlement Party No II
ecial Assistant Collector, Nilgiris and Malabar.
spector of Cattle Diseases.

Issued

Recd. *Encl.*

G.O., 9th December 1885, No. 1359.

DECEMBER.

Settlement of Districts.

Secretary of State's despatch approving proceedings of this Government regarding — by independent scale of rates, communicated to the Board of Revenue and the Director of Revenue Settlement and Agriculture.

RECEIVED
11 JAN 86

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169

9TH DECEMBER 1885, No. 1360, REVENUE.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Season Reports for the Week ending 5th December 1885.

READ—the following Telegram from Collector of Ganjam, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 13·28, ragi 27·71, cholum 23·24, cumbu 31·4. No rain ; three rain-gauges removed ; none yet restored. Cholera deaths 33 ; cow-pox slightly exists in Ichápur taluk ; number of deaths not reported yet. Harvest of light paddy is about to be over ; that of irrigated paddy commenced.

READ—the following Telegram from Collector of Vizagapatam, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 13·3, cholum 23·0, ragi 28·9, cumbu 29·4. Small-pox five taluks ; fever six ; no cattle-disease. In Vizianagrum, Pálkonda, Párvatipur taluks crops good ; in Golgonda, Sarvasiddhi, Vizagapatam, Viravilli paddy suffering from blight, elsewhere standing crops fair ; ragi, arika, green-gram, chama harvested in Golgonda, outturn three-fourths ; paddy harvested in Anakápalle, Párvatipur taluks, outturn below half ; black-paddy sown Anakápalle, ragi Bimlipatam, green-gram Pálkonda ; tobacco, chillies, red-potatoes transplanted in Sarvasiddhi, ragi Bimlipatam. Water-supply sufficient. Rainfall below average by 0·6 inches ; no fear distress ; no rain 14 stations ; no report from Balacheruvu ; gauges from Bobbili, Gajapatinagar, Gúdem, Srungavarapukóta, Kotipad, Malkangiri, Naurangapur withdrawn 1st April ; Gunipur, 17th March ; Paderu, Pottungi, 8th April.

READ—the following Telegram from Collector of Godávari, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 14·58, cholum 25·81, ragi 31·50, cumbu 31·66. Fever and small-pox slight ; cholera 26 deaths five taluks ; no cattle-disease. Standing crops generally good ; paddy being harvested, outturn $\frac{3}{4}$; tobacco being transplanted. Godávari water 8 feet above lock-sill. Rainfall to date is above average ; Alamúr, Kottapeta withdrawn 2nd and 26th April, respectively ; not restored.

READ—the following Telegram from Collector of Kistna, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 12·94, cholum 21·4, ragi 26·88, cumbu 23·25. No rain ; rainfall 1st January to date 29·64 against average last three years 39·04. Later dry crops sown ; standing crops generally good ; castor affected by insects in parts. Fever, small-pox and guinea-worm in some taluks ; cholera prevailed in Répalle and Guntúr taluks ; unreported last week attacks 8, deaths 5 ; this week 1 and none ; cattle, condition good. 3·2 feet water over anicut.

READ—the following Telegram from Collector of Nellore, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 13·98, cholum 25·46, ragi 31·59, cumbu 28·35. Health generally good ; small-pox in Nellore, Rápúr, Ongole ; fever in Rápúr, Kanigiri, Udayagiri ; rinderpest in Atmakúr, Kandukúr, Rápúr, Ongole ; deaths 14. Crops standing fair. Agricultural operations—Iswara paddy, cholum, ragi, indigo, horse-gram being sown in some places. Water-supply sufficient. Rainfall *nil*.

READ—the following Report from Collector of Cuddapah, to Secretary to Government, Revenue Department, dated 7th December 1885:—

Average of the district—Rice 13·38, cholum 29·32, ragi 33·67, cumbu 30·97. Health good in Jammalamadugu, Proddutur, Sidhout and Ráyachóti; fever is reported to prevail in a few places in others; a few cases of small-pox reported from Madanapalle; ten cattle in Mamillapalle in Cuddapah taluk reported to have been attacked with epizootic aphtha; in two villages of Badvél and Vontimitta of Sidhout taluk cattle reported to be still suffering from Jabbuvapu (swelling of the thighs); in the former there were 14 attacks and two deaths; in others good. Crops good; the following crops harvested, and their average outturn, paddy $\frac{3}{4}$, ragi $\frac{5}{8}$, cumbu $\frac{3}{8}$, korra $\frac{5}{8}$, arrika $\frac{13}{16}$ and indigo $\frac{13}{16}$. Agricultural operations—Preparing lands for sowing wheat, paddy, ragi in some places; sowing ragi, bengal-gram, wheat, and clearing channels; harvesting ragi, and weeding. Water-supply—Tanks in Pullampet taluk have full supply; in other taluks partial supply; in Cuddapah taluk a few tanks have no supply; river and spring-channels and wells contain good supply. Rainfall *nil.*

READ—the following Telegram from Collector of Bellary, to Secretary to Government, Revenue Department, dated 7th December 1885:—

Rice 12·82, white-cholum 25·40, yellow-cholum 28·84, ragi 31·04, cumbu 25·57. Rainfall *nil.* Health generally good. Sowing bengal-gram, paddy; early dry crops much improved; later sowings thriving in parts of Hadagalli and Harpanahalli; white-cholum crop is attacked with disease; castor-seeds and pulses eaten by caterpillars at Harpanahalli; wet crops good; harvesting paddy, yield average; cholam, ragi, cumbu, korra, gingelly, pulses, yield average in parts and below average in others. Prospects continue favorable.

READ—the following Telegram from Collector of Anantapur, to Secretary to Government, Revenue Department, dated 7th December 1885:—

Rice 13·5, cholum 29·36, ragi 33·74, cumbu 26·79. Health generally good; fever in parts of Uravakonda division, and small-pox in two villages Dharmavaram taluk. Pasture procurable. Standing wet and dry crops generally fair; cholum and castor-oil seeds attacked by slight blight in parts of Tadpatri and Madakasíra taluks; paddy, cholum, wheat, bengal-gram are being sown in parts of five taluks; ploughing in three taluks; cholum, cumbu, chama, korra, varagu, ragi, castor-oil seeds, gingelly, oil-seeds, gram, paddy and ground-nut being harvested, outturn Anantapur, Gooty between 8 and 12 annas; Dharmavaram, Madakasíra 8 annas; Hindupur between 4 and 12 annas. Water-supply fair. Rainfall *nil* during the week; 1·68 inches above average.

READ—the following Telegram from Collector of Kurnool, to Secretary to Government, Revenue Department, dated 8th December 1885:—

District average—Rice 12·52, cholum 30·22, ragi 31·35, cumbu 31·35. No rain. Standing crops fair; early cereals and paddy under harvest, outturn half to three-fourths; paddy crop under canal suffering from want of water owing to breach of anicut. Small-pox in two taluks; cattle-disease, foot-disease in three taluks, and rinderpest in one. Pasture and water sufficient. Prices—Rice rising in one taluk, cholum falling in two and rising in one, cumbu falling in one; other articles stationary.

READ—the following Report from Collector of Madras, to Secretary to Government, Revenue Department, dated 7th December 1885:—

Rice (second sort) 12·08, cholum 16·41, cumbu 17·16, ragi 21·92. Health—Fever prevalent; no cholera; cattle healthy. Imports—Tons, rice *nil,* other grains 185. Rainfall *nil.*

READ—the following Report from Collector of Chingleput, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 13·87, ragi 26·44, cumbu 18·81, cholum 18·10. Health of people good in three taluks ; small-pox in Madurántakam and Chingleput, attacks 14, death 1 ; fever in Chingleput and Ponnéri, attacks 8, deaths 2 ; cattle good in Conjeeveram and Saidápet ; anthrax in Madurántakam and Ponnéri ; rinderpest in Madurántakam, Tiruvallúr and Chingleput ; dropsy in Tiruvallúr and malignant sore-throat in Chingleput, attacks 176, deaths 100. Crops generally fair ; kar is harvested in portions of Madurántakam, Conjeeveram and Tiruvallúr, average half. Pasturage good. Agricultural operations—Ploughing for, sowing and transplanting samba, navarai in Chingleput, Tiruvallúr and Saidápet ; weeding in Tiruvallúr. Water-supply sufficient. Rainfall—Saidápet 0·25, Homes' Gardens 0·50, other stations *nil* ; all reported. Prospects fair.

READ—the following Report from Collector of North Arcot, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 14·6, cholum 25·9, ragi 29·4, cumbu 25·3. Health—Fever prevails in the Chittoor, Palmanér and Vellore taluks and Punganúr, Tirupati and Venkatagirikóta divisions, and small-pox in the Chittoor and Palmanér taluks ; 162 attacks among cattle from rinderpest and 7 attacks and 5 deaths from anthrax were reported during the week. The standing crops are reported to be generally in good condition, except in the Palmanér taluk where they are reported to be fading for want of sufficient rain ; paddy, ragi and indigo were harvested during the week, and the outturn was below the average. Agricultural operations are progressing, except in the Kangundi and Punganúr divisions where they are reported to be limited. Water-supply—Tanks generally have from one to six months' supply except in the Palmanér and Gudiyátam taluks and Kangundi division, where the supply is scanty. Rainfall—No rain fell during the week ; the average rainfall up to date since January 1885 is 28·25 inches against 38·41 inches, the average of the past four years ; more rain is needed.

READ—the following Report from Collector of South Arcot, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 14·56, cholum 26·88, ragi 31·32, cumbu 31·11.

Average Price of Cholum arrived at for past and previous Weeks.

	Past Week.	Previous Week.
Tiruvannámalai	30·24	30·24
Chidambaram	23·52	25·20
Total ...	53·76	55·44
Average ...	26·88	27·72

Generally healthy ; fever prevailed in parts of Tindivanam and Vriddháchalam taluks, and small-pox in parts of Tindivanam, Villupuram and Vriddháchalam taluks ; cattle were generally healthy, but they suffered from epizootic aphtha (கோமாரி) in parts of Kallakurchi and from anthrax (அடைப்பான்) in parts of Tiruvannámalai, and the number of deaths reported during the week was 65 against 65 attacks, *i.e.*, 2 in Kallakurchi and 63 in Tiruvannámalai. The standing crops, viz., millet, ragi, varagu, cholum, horse-gram, ground-nut and gingelly in dry lands, as well as sugar-cane and paddy in wet lands, were generally good, but it is reported that ground-nut and varagu are affected by insects, &c., to some extent, the former in parts of Tindivanam and Villupuram taluks and the latter in parts Tindivanam ; also paddy crops suffered to some extent from disease called "anaikkombu" (ஆனைக்கொம்பு) in parts of Tindivanam and Tiruvannámalai taluks ; ragi and varagu were harvested in parts of Tirukoilúr taluk, and ragi and kar-paddy in parts of Vriddháchalam taluk, the outturn was 8 annas.

Agricultural operations—Ploughing, manuring and weeding operations were in progress in parts of the district; ragi, varagu, gingelly and samba were sown in parts of the district; paddy was also transplanted in some places. Water-supply generally good. Rainfall *nil*; Merkanam, Gingee, Panruti and Ulundurpet reports not received; rainfall at Panruti, Bhuvanigiri, Kallakurchi and Ulundurpet for previous week was *nil*; rainfall up to date from 1st January 1885 was 38·64 inches; average rainfall in three previous years 41·16; the average is given for all 17 stations at which rain-gauges were retained, while the rainfall up to date in the current year is entered only for nine stations at which the gauges have been retained throughout the year.

READ—the following Telegram from Collector of Tanjore, to Secretary to Government, Revenue Department, dated 8th December 1885:—

Rice 14·31, cholum 25·33, ragi 28·78, cumbu 23·56. Rainfall—Negapatam 0·20, Vedarniem 0·10; no rain in 14 stations; report not received from Mutupet; no rain in Arantangi last week; rainfall up to average. Prospects favorable if we have moderate rain shortly. Rivers falling low, 1 to 5 feet. Crops generally good. Harvest—paddy, cholum, ragi, outturn below average. Health of people and cattle generally good; one death from cholera.

READ—the following Report from Collector of Trichinopoly, to Secretary to Government, Revenue Department, dated 7th December 1885:—

Rice (second sort) 13·14, cholum 22·40, ragi 27·99, cumbu 25·75. Health good; no cholera or cattle-disease; slight small-pox.

	SMALL-POX.	
	Attacks	Deaths.
Kulitalai taluk	17	3
Perambalúr taluk	7	...
Udayárpálaiyam taluk	6	4
Pudukóta	20	2

Crops good. Agricultural operations—Paddy, cumbu and gram sown; ragi and second-crop paddy transplanted; kar-paddy, samai, ragi harvested, with outturn 8 to 12 annas, 8 annas, and 12 to 16-anna crop respectively. Water-supply—The Cauvery is going down; moderate supply in river-channels, and rain-fed tanks have from one to two months' supply. Rainfall *nil*; Musiri return not having been received, the prices of last week are entered for that taluk.

READ—the following Telegram from Collector of Madura, to Secretary to Government, Revenue Department, dated 7th December 1885:—

Rice 13·25, cholum 23·22, ragi 22·68, cumbu 22·78. No rain; number of stations not reporting, 4; previous week no rain at the remaining 8 stations; rainfall below average. Health of people and cattle generally good; fever prevalent; attacks among cattle 14, deaths 13—2 from choking, 2 from dysentery, 7 from braxy, and 2 from septicæmia. Water-supply sufficient. Pasture fair.

READ—the following Telegram from Collector of Tinnevelly, to Secretary to Government, Revenue Department, dated 7th December 1885:—

Rice 13·29, cholum 19·85, cumbu 18·71, ragi 25·26. Rainfall *nil*; rainfall since January 20·96 inches against 25·55, average; want of rain very much felt throughout. Agricultural operations continue, but retarded in parts for want of rain. Health good; cattle well. Samai, cumbu and ragi harvested in parts, outturn up to average; wet crops in parts of Tinnevelly and Tenkási affected by diseases caused by absence of rain; dry crops damaged in parts of Nángunéri by insects called masukutti.

Read—the following Report from Collector of Coimbatore, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 13·38, cholum 20·51, ragi 26·27, cumbu 25·03. Slight fever and slight small-pox in two taluks; slight dysentery in one taluk; cattle-disease in two villages of Polláchi taluk, attacks 7, deaths 6. Paddy good in six taluks, but rain wanted in Coimbatore and Kollegál; cholum under wells good; cholum in punjah good in six taluks, fair in Dhárápuram, but want rain in Coimbatore, and damaged by insects in parts of Satyamangalam; ragi under wells good; ragi in punjah good in three taluks, and want rain in Coimbatore and Kollegál; cumbu in punjah good in five taluks, fair in Palladam and Dhárápuram, want rain in Coimbatore, and damaged by insects in parts of Satyamangalam; harvesting paddy in four taluks, outturn average in Dhárápuram and above average in Erode, Polláchi and Palladam; cholum in punjah in two taluks, outturn average in Karúr and below average in Bhavání; ragi under wells in four taluks, outturn average in Udamalpet, Palladam and Dhárápuram and below average in Bhavání; ragi in punjah in two taluks, outturn above average in Polláchi and below average in Bhavání; cumbu in punjah in four taluks, outturn average in Erode, Polláchi and Palladam and below average in Bhavání. Rain sixteen stations *nil.* The prospects of the district remain the same as in the last week.

Note.—There is a fall in the prices of ragi and cumbu, chiefly in the taluk of Satyamangalam. Explanation has been called for from the Tahsildar, on receipt of which a report will be submitted.

Read—the following Telegram from Collector of Nílgiris, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 9·7, cholum 15·0, ragi 19·2, cumbu 17·6. Health good. Crops fair, average yield half; lands being tilled. Water sufficient. Rainfall—Kundahs not received; other stations *nil.*

Read—the following Report from Collector of Salem, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Rice 14·33, ragi 29·03, cumbu 23·80, cholum 23·40. Crops in good condition; oil-seeds affected by insects in parts of two taluks; paddy in five taluks and ragi in six are being harvested, yield below the average. Rainfall not up to average. Agricultural operations—Paddy being sown in parts of six taluks. Health generally good, but fever in parts of Uttankarai and small-pox in Tirupatúr; two attacks of cholera during last week in the Salem taluk have now been reported, of which one proved fatal; cattle-disease in parts of four taluks :—

Name of disease.	Number attacked.	Number died.
Foot and mouth disease	75	...
Dysentery	1	...
Fever	5	3
Sappai novu (சப்பைநோவு)	22	2

Water-supply sufficient for agricultural purposes except in three taluks. Rainfall *nil.*

Read—the following Telegram from Collector of South Canara, to Secretary to Government, Revenue Department, dated 8th December 1885 :—

Rice 15·08, ragi 23·47. Few cases of fever and small-pox in three taluks and measles in parts; foot-disease among cattle in parts of two taluks. Second rice-crop cultivation almost completed; plants in fair condition. Water-supply sufficient. Rainfall *nil.*

READ—the following Telegram from Collector of Malabar, to Secretary to Government, Revenue Department, dated 8th December 1885 :—

Rice 12·98, ragi 23·15. Small-pox slight in five taluks; fever slight Wynaad and Wálawanád; cholera in Calicut, Wálawanád, and Ponáni, 33 cases, 16 deaths. Harvesting of later first crop continues in Pálghat, outturn 14 annas; second-crop cultivation in fair condition. Cattle-disease in Wálawanád and Pálghat, 37 attacks, chiefly aphtha and hoof disease, 5 deaths. Pasture fair. No rain.

READ—the following Telegram from Dewan of Travancore, to Secretary to Government, Revenue Department, dated 7th December 1885 :—

Season telegram, Trivandrum. Paddy thriving. Price—Madras second-sort rice 9·10 and paddy 23·9 seers per rupee. Fever in some places. Week's rainfall 0·05.

ORDER—dated 9th December 1885, No. 1360, Revenue.

Miscellaneous.

Communicated to the Board of Revenue.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Sanitary Commissioner for Madras.
,, the Chief Engineer for Irrigation.
,, the Surgeon-General with the Government of Madras.
,, the Financial Department.

Exd. W. H. French.

100 Copies.

172

No. 14

Communicated to the Officers in charge of Settlement
ties and to the Inspector of Cattle Diseases.

ept. of Revenue Settlement
and Agriculture,
Madras, 4 ~~December~~ 188~~5~~6.
January

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No III
,, ,, Special Assistant Collector, Nilgiris and Malabar.
,, ,, Inspector of Cattle Diseases.

Govt. of {1885} Madras

REVENUE.

Issued

Recd. *Encl.*

G.O., 9th December 1885, No. 1360

DECEMBER.

Season.

Reports on the state of — for week end
5th December 1885, communicated to the Bo
of Revenue.

RECEIVED
22 JAN 86

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Ref Pro 67

20th November 1885, No 1297, Revenue.

178-

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Notification of the Government of India, Revenue and Agricultural Department (Museums and Exhibitions), dated Simla, 6th November 1885, Circular No. 66 Ex.—1L—49 :—

The appended forms of application for the u e of private exhibitors, received from the Royal Commission for the Colonial and Indian Exhibition, 1886, are published for general information. The sections of the exhibition to which the forms refer are independent of, and distinct from, the course int nded for the display of specimens of arts, manufactures and products collected und r the direction of the Government of India and the several Local Governments.

(By Order.)
(Signed) C. S. BAYLEY,
Under Secy. to the Govt. of India.

Circular No. 66 Ex.—1L—49.

Government of Madras.
,, of Bombay.
,, of Bengal.
,, of North-Western Provinces and Oudh.
Government of Punjab.
Chief Commissioner, Central Pr ovinces.
,, ,, British B rma.
,, ,, Assam.
Resident at Hyderabad.

Copy forwarded to the Local Governments and Administrations noted on the margin, with a request that the notification and forms may be published in the local Gazette.

(By Order.)
(Signe) C. S. BAYLEY,
Under Secy. to the Govt. of India.

To the Secretary to the Government of Madras.

Enclosures.

COLONIAL AND INDIAN EXHIBITION (LONDON, 1886).

Form of Application to exhibit Tea Coffee, and Cocoa.

The Royal Commission invites applications for sp ce to exhibit samples of tea, coffee, and cocoa, of Indian or Colonial production, from *bonâ fide* planters and manufacturers having places of business in India or the Colonies.

It must be distinctly understood that no applicati ns from importers can be entertained.

Indian samples must be delivered, carriage free to Messrs. King, Hamilton and Co., Calcutta, or Messrs. Henry S. King and Co., 65, Cornhill, London, who will bear all expenses of subsequent transit and exhibition.

Colonial samples must be delivered, carriage free, to Messrs. Henry S. King and Co., 65, Cornhill, London.

Applications to be made to Messrs. King, Hamilton and Co., Calcutta, or Messrs. Henry S. King and Co., 65, Cornhill, London, who will submit same to the Secretary to the Royal Commission.

To the Secretary to the Royal Commission.

Please allot to me (us) space for the exhibition of the following samples * :—

Distinguishing number or mark of sample.	Name or description of sample.	Name of garden or estate producing sample.	District.

In case of my application being granted, I declare that I will adhere to the publishe regulations of the Royal Commission.

Signature of intending exhibitor or firm of exhibitors.

Address (Town)

(Province)

Date

COLONIAL AND INDIAN EXHIBITION (LONDON, 1886).

Form of Application to exhibit Paintings, &c.

Indian Section.

The Royal Commission is prepared t [illegible] ve applications from persons desirous of exhibiting oil-paintings, water-colors, an [illegible] Indian subjects by artists and amateurs resident in India.

The Royal Commission will defra [illegible] packing and freight from Bombay to London of pictures from India, subject to the [illegible] ditions :—

(1) All paintings and drawing [illegible] be inspected at Bombay, in order that any which may be considered unsuita [illegible] le should not be sent forward.

(2) The paintings and drawings, which must be without frames, must be sent to Messrs. King, King and Co., of Bombay, not later than the 30th of November 1885.

(3) Frames for pictures will be provided by Messrs. Henry S. King and Co., London; full particulars of cost, &c., can be obtained from Messrs. King, King and Co., Bombay, and Messrs. King, Hamilton and Co., Calcutta.

(4) Artists and amateurs now in Europe, and formerly resident in India, who desire to exhibit pictures of interest connected with India should communicate with Messrs. Henry S. King and Co., 6 [illegible], Cornhill, not later than the 31st December 1885.

(5) It must be understood that the Royal Commission undertakes no risk, and that exhibitors must make thei own arrangements as to insurance.

(6) It must be distinctly stated when pictures are intended for sale; and the price in English currency must be notified on the application form. Messrs. King and Co. are authorised to make a charge of 5 per cent. on all pictures sold.

---

* As this description will form the basis of the catalogue entry, it is requested that it may be carefully written.

To the Secretary to the Royal Commission.

Please allot to me space to exhibit pictures as described below *:—

Distinctive mark or number.	Size unframed.	Size framed.	Description: if oil, or water-colors, &c.	Subject.	Name of artist.

In case of my application being granted, I declare that I will adhere to the published regulations of the Royal Commission.

Signature

Address (town)

(Province)

One of the attached labels is to be affixed to the back of each picture to facilitate identification.

---

* As this description will form the basis of the catalogue entry, it is requested that it may be carefully written.

COLONIAL AND INDIAN EXHIBITION.

Number

Subject

Price £ ,, ,,

Exhibited by

Address

COLONIAL AND INDIAN EXHIBITION.

Number

Subject

Price £ ,, ,,

Exhibited by

Address

COLONIAL AND INDIAN EXHIBITION.

Number

Subject

Price £ ,, ,,

Exhibited by

Address

COLONIAL AND INDIAN EXHIBITION.

Number

Subject

Price £ ,, ,,

Exhibited by

Address

COLONIAL AND INDIAN EXHIBITION.

Number

Subject

Price £ ,, ,,

Exhibited by

Address

COLONIAL AND INDIAN EXHIBITION (LONDON, 1886).

Form of Application for Space to show Goods in the Private Exhibitors' Court.

Indian Section.

The Royal Commission invite applications for space to exhibit in the Indian section of this exhibition from *bonâ fide* merchants and manufacturers having places of business in India. It must be distinctly understood that no applications from importers or agents can be entertained; but Indian exhibitors may appoint London representatives as their agents in the forthcoming exhibition.

Allotments will be made by the Royal Commission in accordance with the space available.

Applications must be made by Indian firms on this form, and no allotment will be finally made before such application has been received.

Applications to be made through the Secretary to the Government of India, Revenue and Agricultural Department, or through Messrs. HENRY S. KING and Co., and their Indian branches, to the Secretary to the Royal Commission.

To the Secretary to the Royal Commission.

Please allot to me (us) the following amount of space for the exhibition of articles described opposite :—

Floor space...............feet × ....feet.

NOTE.—The private exhibitors have a special gallery allotted to them, with a space twelve feet deep on either side of a central passage. This space is divided into bays or lengths of ten feet, which are available for conversion into small shops, two or three of which can be thrown into one where a larger space is required. The erection of a screen or facade along the front by the exhibitor is compulsory, and can either be done by the exhibitor, who must submit a design for approval, or will be furnished by the Commission, at the nominal cost of £1 per foot run.

Special arrangements will be made for exhibiting carpets, which must not exceed 12 feet by 9 feet.

This form does not apply to exhibits of paintings, tea, coffee, cocoa, tobacco, and cigars, for which special forms of application are prepared.

*Description of Articles.**

See regulation No. 32 (on other side).

In case of my application being granted (wholly or in part), I declare that I will strictly adhere to the published regulations of the Royal Commission, as printed overleaf, which I will consider as binding, and to any further regulations which may be issued from time to time.

Signature of intending exhibitor or firm of exhibitors.

Address (town) ____________________

(Province) ____________________

London representative (if any).

Name ____________________

Address ____________________

Date ____________________

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* As this description will form the basis of the catalogue entry, it is requested that it may be carefully written.

REGULATIONS.

1. The exhibition will be opened on or about the 1st May 1886, and will remain open for a period of about six months.

2. Subject to the conditions stated in regulations 3 and 4, the objects to be exhibited are left entirely to the discretion of the Governments participating, in so far as they illustrate the sources, products, and manufactures of the Colonies and the Indian Empire. For reasons stated elsewhere, no classification has been attempted by the Royal Commission; but each Government is invited to classify its own collection.

3. All fulminating and explosive substances and all dangerous substances are absolutely forbidden to be sent, but they may be represented by models or dummies.

4. Spirits, oils, essences, corrosive substances, and generally all substances which might spoil other articles or cause inconvenience to the public, can only be received in substantial and suitable vessels of small size.

5. There will be no charge for space.

6. Motive power and water will be supplied free of cost, *provided that notice by letter or cable is given before the 1st January* 1886. Foundations can be laid, under the superintendence of the Secretary to the Royal Commission, upon requisition from the Executive Commissioners with their order for payment. The work will be done at the expense of the Commissions requiring it; and full particulars of the size, character, and intended position of machines should be given.

7. As the allotments of space have in most cases been already notified to the Colonial and Indian Governments, no further applications can, except under special circumstances, be entertained. Applications to exhibit from any individual or firm will be referred to the Executive Commissioners for the various Colonies and for India.

8. The Executive Commissioners appointed by their respective Governments will have the entire control of the arrangements of the goods exhibited in their respective sections, subject to the conditions stated in regulations 9 to 16.

9. At least one main passage of not less than fifteen feet must extend throughout each court from end to end; and, where doors or openings occur, passages of not less than ten feet in width must be provided communicating with the main central passage. The necessity of providing adequate space for allowing the proper inspection of articles exhibited need scarcely be insisted upon.

10. Signs or name-boards should be placed parallel with the main passages; that is, parallel with the frontage of the respective stands. It is suggested that they should be black with gold letters. Care should be taken to prevent any interference with the electric lighting arrangements.

11. All handbills, printed matter, &c., connected with exhibits, and intended for gratuitous distribution, should be duly authorized by the Executive Commissioners for each country, who will find the Secretary to the Royal Commission ready to co-operate with them.

12. It is specially requested that no cases or goods should exceed the height of ten feet. This rule is not intended to prevent the erection of any special trophies; but designs to scale of all trophies should, previous to their erection, be notified to the Secretary to the Royal Commission.

13. As the exhibition buildings are leased by the Royal Commission, no alterations affecting the structure of the buildings as regards the floor, walls, or roofing can be permitted without special application to the Secretary to the Royal Commission.

14. Executive Commissioners will be required to provide all necessary attendance for keeping the stands and exhibits in their section properly cleaned and in good order: all stands should remain uncovered during the hours the exhibition is open to the public.

15. It is probable that the hours during which the exhibition will remain open to the public will be from 10 A.M. to 10 P.M. on all days, except Wednesdays and Saturdays, when the hour of closing will be 11 P.M. These arrangements are, however, subject to alterations. The exhibition will not be open on Sundays.

*16. No exhibit may be removed from the exhibition buildings until the close of the exhibition without the permission of the Executive Commissioners, countersigned by the Secretary to the Royal Commission; and consequently no selling, with a view to removal prior to the close of the exhibition, should be allowed.

---

* *N.B.*—A modification of rule 16 as applied to the private exhibitors' court has already been notified by me to Mr. Buck. It will be understood, however, that the rule cannot be cancelled, although a special exception or modification has been allowed as regards this court.

17. No article exhibited may be photographed, drawn, copied, or reproduced in any manner whatsoever without the special sanction of the Executive Commissioner of the section: this sanction should be notified to the Secretary to the Royal Commission.

18. All packages containing goods intended for exhibition must have painted on them the distinctive mark *C. I. E.*, together with the name of the colony from which they are sent. They must in all cases be consigned to the Executive Commissioner of the Colony from which they are sent.

19. All goods intended for exhibition should reach the exhibition buildings on or before the 31st January 1886, and, if convenient to Executive Commissioners, they can be received from 1st January 1886: it is hoped that everything will be reported as ready for inspection at least fourteen days previous to the end of April.

20. Cases should be unpacked with the greatest possible despatch, and when empty should be removed immediately from the buildings. The Secretary to the Royal Commission will have pleasure in recommending places of storage for empty cases; but it must be distinctly understood that all arrangements for the unpacking, removal, storage, and bringing back of cases must be made, and expenses borne, by the various Colonial and Indian Commissions.

21. All expenses connected with the installation and display of exhibits will be defrayed by the Colonial and Indian Commissions.

22. The Royal Commission reserves to itself the right of refusing to admit any exhibit.

23. The Royal Commission reserves to itself the sole right of publishing and selling a general catalogue, and general guide and plans of the exhibition; and for this purpose requests that a descriptive list, duly classified, of the goods intended for exhibition, may be forwarded to the Secretary to the Royal Commission by the respective Commissions not later than the 1st December 1885. Each Commission will, however, be at liberty to publish and sell through the official publishers to the Royal Commission a special catalogue of its collection. It is hoped, for the sake of uniformity, that the size of all such publications may be the same size as that of the general catalogue, known as demy 8vo. ($8\frac{7}{8}$ in. by $\frac{5}{8}$ in.).

24. A Colonial dining room will be organised under the superintendence of the Royal Commission, to which exhibitors are invited to send, through their Executive Commissioners, Colonial preserved food and wines for consumption by visitors. Special regulations have been prepared for this department.

25. Arrangements will be made for the sampling of wines; and an officer will be appointed to superintend this department. Cellarage accommodation will be provided.

26. No refreshment or tasting bars will be allowed, beyond those arranged for by the Royal Commission.

27. It is proposed to organise a fruit and vegetable market, at which Colonial and Indian produce will be on sale. Special regulations will be framed for this section of the exhibition.

28. It is proposed to hold an exhibition of living animals from the Colonies and India. Special rules will be framed for its regulation.

29. The right to add to, alter, amend, or expunge any of these rules is reserved by the Royal Commission.

30. The Royal Commission, while taking every precaution for the protection of articles in the buildings, cannot hold itself responsible for their loss or damage from whatsoever cause arising.

31. If any damage or injury shall be caused or occasioned during the exhibition by any exhibited machine, implement, or article to any visitor or other person, or to any officer, servant or others then and there employed by the Royal Commission of the Colonial and Indian Exhibition, 1886, then the Executive Commissioner, in whose section such machinery, implement, or article may be placed shall indemnify and hold harmless the said Royal Commission from and against all actions, suits, expenses, and claims on account or in respect of any such damage or injury which may be so caused or occasioned.

32. Only objects of British East Indian manufacture will be admitted; and under no pretence whatever will Persian, Turkish, Chinese, or Japanese art works be permitted to be either shown or stored in the exhibition. The Royal Commission reserves the right of ordering the removal of any objects it considers disqualified; and the exhibitors hereby engage to remove any such exhibits after due notice, or to permit the removal by officers of the Commission.

33. All communications to be addressed to the Secretary to the Royal Commission, Exhibition Buildings, South Kensington, London, S.W.

(Signed) J. R. ROYLE,
Asst. Secy. to the Royal Commission.

9th September 1885.

ORDER—dated 20th November 1885, No. 1297, Revenue.

Miscellaneous.

Communicated to all Collectors through the Board. The widest publicity possible should be given to the notification and forms of application.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the President, London Exhibition Committee.
,, the Superintendent, Government Central Museum.
,, the Superintendent, Government Press.

Exd. W. H. French.

120 Copies.

177

No 129

Communicated to the
fficers in charge of Settle-
ent Parties, Inspector of
attle Diseases, and
vernment Mineralogist
information.

Ag: Director of Rev: Settt
& Agriculture.

Dept. of Rev: Settt & Agre
Madras 16 January 1886

To

The Dep: Director of Rev: Settt
Party No III

Govt. of {1885} Madras.

REVENUE.

Issued

Recd. *Encl.*

G.O., 20th November 1885, No. 1297.

NOVEMBER.

Colonial and Indian Exhibi

Notification and forms of applic
of private exhibitors for the —,
to all Collectors through th
instructions.

RECEIVED
23 JAN 86

Regd.

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30th November 1885, No. 1329, Revenue.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Report on the Progress and Condition of the Government Botanical Gardens and Parks, Nílgiris, for the Official Year 1884-85.

I have the honor to forward to you herewith my Annual Report on the progress and condition of the Government Botanical Gardens and Parks on the Nílgiris for the year 1884-85.

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(c) Stonehouse Park.
(d) Church Hill Park.
(e) Crewe Hall Estate and adjoining grounds.

(2.)—Coonoor.

(f) Sim's Park.

(3.)—Barliyar.

(g) Experimental Garden.

(4.)—Kalhatti.

(h) Experimental Garden.

IV. Proposed New Gardens at

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(k) Calicut.

V. Proposed Museum of Natural History in Ootacamund.
VI. Herbarium.
VII. Library.
VIII. Notes on some of the more interesting plants which have been introduced or grown in the Gardens during the year.
IX. Receipts and expenditure.
X. Miscellaneous information.

I. Staff of Officers.—The staff of officers remains the same as it was in 1883-84. From Mr. Jamieson, the Curator, to the lowest subordinate, all have shown the greatest care and diligence in their work.

With respect to Mr. C. McDonald, the Overseer for general works, and Mr. T. Burrows, the Overseer for the propagating houses and nurseries, I wish to point out that their pay is very inadequate for the responsible duties which they have to perform. Mr. McDonald receives only Rs. 35 per month while Mr. Burrows receives only Rs. 25. The duties they both have to perform require far more skill and intelligence than that required of a Sub-overseer in the Cinchona Plantations, yet the latter get Rs. 50 a month. I would urge the claims of these men.

With respect to the writer in the office, Ramanjulu Naidu, I have the same to urge. His duties are more arduous and his responsibility is greater than what is required of the second clerk in the office of the Cinchona Department, yet he receives Rs. 50 a month, while Ramanjulu Naidu gets only Rs. 30.

II. Season.—The weather during the past year was, with the exception of the months of October and November, unusually dry, and little or no planting could be attempted till the end of the former month. In October no less than 22·84 inches of rain were registered. More than half of this fell in two days, and the wash, which this heavy fall occasioned, was very great. The winter was comparatively mild and little harm was done by frost.

III. General condition of the Gardens and Parks or improvements which have been made in them during the year.—(1.)—Ootacamund—(a) *Government Gardens.—Upkeep.*—During the past year considerable alterations and improvements have been made in these gardens. The ground on either side of the entrance gate, and which for the last few years it would have been unwise to attempt to decorate, owing to the incomplete state of the works which were being carried on immediately about them, has been defined and will shortly be planted with shrubs and trees. The upper part of the gardens, which lies between Government House and Garden Cottage and bounded below by the new road, has been entirely re-made and planted with grass and shrubs. This portion of the gardens had always been in a rough and untidy condition and was last year rendered still more unsightly by the greater part of the turf having been removed for the purpose of grassing the parapet of the new road. The right-hand bank of this road on approaching Government House is so steep that no grass can be grown upon it and it will always remain as an ugly cliff of bare earth, unless something is done to hide it. I would recommend that these portions of the road should be built up with a loose revetment, similar to that which fronts the entrance at Government House. The cost of such a revetment would not be great and it would prevent the possibility of any landslips taking place. Such a revetment, too, could be covered with succulents or creepers. All the lawns in the gardens have now been levelled and the grass upon them is being gradually brought into better order. Last year the grub of the cockchafer did a good deal of mischief to the grass, but this was remedied by top-dressing the injured portions with manure in the early spring. Now that the floor of the garden has been put to rights, I hope next year to re-establish the flower beds and shrubs which, during the time that the alterations were going on, had to be removed. The bund of the tank below the band-stand gave way during the heavy storm which occurred in October last. The destruction of the bund was due partly to the tank having been dredged too deeply and partly to trees having been planted upon it. The depth of the tank has now been lessened and made uniform and the bund has been restored and strengthened. Provision has been made for putting up a fountain next winter in this tank opposite to the band-stand.

I propose next year to commence making improvements which are much wanted in the upper part of the gardens.

Kitchen Garden and Herbaceous Ground.—Owing to the large number of works to be carried out during the past year, I regret to say that I found it quite impossible to do anything in the way of getting up either an experimental kitchen garden, or a garden for the cultivation of local wild herbaceous plants.

Nurseries.—The out-door nurseries have been quite filled with plants raised for the purpose of filling up the old demolished sholahs in the upper part of the gardens, and with plants raised from the seed which had been sent to us by various donors.

Next year I propose adding largely to these old nurseries in order to accomodate our constantly increasing stock of plants.

Forest of Blue-gum trees.—The forest of blue gums lying north of Government House and which formerly belonged to the Forest Department has been annexed to these gardens (*vide* G.O., No. 3002, dated 15th July 1884).

Buildings.—The conservatory on the lawn facing the entrance gates is in a very bad state of repair and will not last many years longer. To repair it thoroughly would cost a large sum of money, while all the plants which it now contains would have to be removed during the time that it was under restoration. I would, therefore, recommend that this house should be allowed to remain as it is until no longer serviceable and that it should then be pulled down and rebuilt on some other part of the gardens. If this building was removed from its present site there would be a continuous stretch of lawn from the entrance to the gardens to the band-stand tank.

The other conservatories and buildings are all of them in a fair state of repair.

(*b*) *Government House Garden.*—All works connected with the buildings of the Government House and adjoining offices having been completed, it was possible last spring to begin gardening operations. The lawns at the back of the house have been improved, while the slopes in front, below the new terraces, have been cleared of scrub and re-grassed. This part of the ground has also been planted with clumps of trees and shrubs; the former with the view of eventually taking the place of those which now exist and which, I am sorry to say, are in such an unhealthy state that they will not last many years longer.

A neat and spacious green house has been built for the purpose of growing decorative plants, with which it will be gradually furnished. The remaining parts of these gardens are being prepared for their adornment during the present year.

(*c*) *Stonehouse Park.*—The grass land immediately about the new building was cleared of weeds and such trees as were either dying or as obstructed views were cut down and others planted in more suitable places. The trees owing to the lateness of last year's season were not planted till October; they were, however, well established in baskets before being put out and afterwards carefully protected during the spring droughts. They are now for the most part doing well; a few of them have been destroyed by cattle, which either strayed or were deliberately sent by the villagers of Old Ooty to graze in the park at night; and until it can be afforded to fence the whole of the land, young trees and shrubs will always be liable to damage from this source. Nothing has yet been done in the way of planting shrubs immediately about the new buildings as the surrounding ground is still in the hands of the Public Works Department. All building operations, however, will shortly be finished, so that this year we may hope to get this portion of the park planted up also.

(*d*) *Church Hill Park.*—During the past year the usual upkeep and nothing more has been carried on.

(*e*) *Crewe Hall Estate and adjoining Grounds.*—Nothing during the past year was done to ornament these grounds owing partly to finding it difficult to provide the necessary labor and partly to the consideration that it would be of little use to do anything in the way of planting until a substantial fence had been placed all round the ground, as these estates have, during the last two years, become a common grazing ground for bullocks, sheep and goats. During the present year, I hope to see it fenced and planted.

2. COONOOR—(*f*) *Sim's* PARK.—The upkeep has been satisfactorily maintained. Some damage was done to the roads, paths and bridges during the heavy rains of last autumn, but nothing more than could be repaired by the laborers employed in the park. A bridle road is being made through the new sholah which was last year annexed to the park. This will afford a pleasant ride for such as desire to pass from Coonoor to Wellington. It was first proposed to make this into a carriage instead of into a bridle road; but the cost of the former proposal was found to be too great to be incurred at present and the idea was therefore abandoned. All the more important trees and shrubs have been labelled.

New Nurseries.—These are intended chiefly for raising a stock of sholah trees which grow on the Coonoor ghât and have been made upon the abandoned tennis ground.

3. Barliyar—(*g*) *Experimental Garden.*—This garden was of late years becoming overgrown with worthless coffee, oranges, pomeloes, &c., and which were cramping many of the more valuable trees. I have had all these cleared away, and I have also cleared of secondary jungle, about an acre of ground, which had hitherto been left uncultivated. This will give a sufficiency of room for planting out new introductions for some years to come. Most of the trees are flourishing; they have all been identified, and I have ordered that they shall have a zinc tally, with a number punched on it, attached to each. This, in the hot climate of Barliyár, will be more lasting than the usual painted label, and it will at the same time be much more economical.

4. Kalhatti—(*h*) *Experimental Garden.*—Nothing of any importance has been carried out during the year in this garden. The *Cinchona morada* and *verde* seedlings which were put out last year have done very badly; the dry climate evidently did not suit them. In my last year's report I stated that I doubted if it was worth the while of Government to continue the cultivation of this garden, and I am now still more of the opinion that it is not.

IV. Proposed new Garden at—(*i*) *Gúdalúr.*—In connection with the proposed establishment of a garden at Gúdalúr, I have been in communication with the Karistan of the Raja of Nilambúr, who owns all the land in that neighbourhood, and I find it would be possible to acquire a plot of ground on a lease not exceeding 99 years at the very moderate rate of 8 annas an acre per annum. I would propose that 5 acres of ground be taken up on a lease of not less than 50 years.

(*k*) *Calicut.*—With respect to the establishment of a garden at Calicut, I have written to the Collector of Malabar, Mr. Logan, asking him kindly to ascertain what suitable ground could be acquired, and when I hear from him, I will go to Calicut and select that which seems to me the best site. I think that as in the case of the garden at Gúdalúr, 5 acres of land will be sufficient.

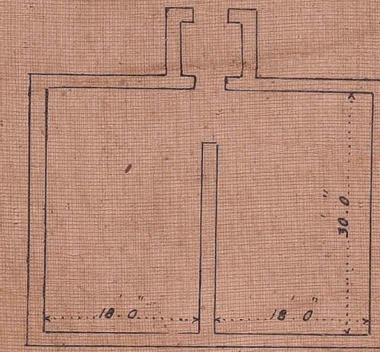
V. Proposed Museum of Natural History in Ootacamund.—In my report of last year, I asked if Government would be inclined to sanction the establishment of a small museum in Ootacamund, which should contain typical collections of objects of interest to those living on the Nílgiri plateau and in the Wynaad, and I further stated that I thought such a museum should take in all the chief branches of Natural Science—Botany, Zoology, Geology, Mineralogy and Ethnology. Government, in paragraph 12 of their G.O., dated 20th October 1884, No. 1155, Revenue, reviewing my report approved of the suggestion and they accordingly requested me to work out the details of the scheme in communication with the Superintendent of the Government Central Museum, Madras, the Conservator of Forests, Northern Circle, and the Collector of the Nílgiris.

Owing to the absence from the Hills of one or other of the above appointed Committee, no meeting was held until the 18th of last month. I then explained what I considered should be the scope of the museum, and I produced a plan of a building which I thought would be sufficiently large to contain all such collections as might be acquired during the first few years of the museum's existence, and I pointed out that the building, which I proposed, would admit of being indefinitely extended. With respect to the scope of the museum, I urged upon my colleagues that it would be desirable that at first the collections should be confined to such objects only as would be of interest to the ordinary well-educated and intelligent resident, European or Native, and that complete collections of everything existing in the district which would be serviceable only to specialists should be allowed to stand over to a future day. These propositions, however, met with their most decided disapproval. They were unanimous in thinking that the scope which I proposed was far too narrow, and that instead of commencing with a small building and adding to it as occasion might require, a large museum should be built at once, which would accommodate a perfect collection of all natural history objects.

Seeing that we were of such very opposite views as to what ought to be done, I asked Doctor Bidie, Mr. Burrows and Mr. Gamble to put upon paper the views which they had advanced in the discussion. This they have kindly done, and I annex a copy of the report which they have drawn up on the subject.

Report by Doctor Bidie, Mr. Burrows and Mr. Gamble.

In accordance with the order of Government conveyed in paragraph 12 of G.O., Revenue Department, No. 1155 of 20th October 1884 (Board's Proceedings, No. $\frac{3903}{\text{Forest 393}}$ of 17th November 1884), we met at Mr. Lawson's office on the 18th August 1885.



Mr. Lawson submitted to us his proposed plan of a museum building, 30 feet × 36 feet, without offices of any kind. We considered that such a small house would not meet the intention of Government, nor suffice for the objects of a provincial museum, as understood by us, viz, that it should contain such a representative collection of local specimens as would make it at once attractive and instructive to the public, for whose benefit it would be started and maintained. We are of opinion that it would be quite insufficient to hold the collections which would adequately represent the Botany, Zoology, Geology, Mineralogy and Ethnology of this interesting district, and that it would be necessary to provide a room of larger size for the exhibits as well as a work room for an Assistant in charge, who might very usefully be a taxidermist such as Dr. Bidie thinks could be found for a comparatively small monthly salary. We are informed that a local museum was once before started in Ootacamund and proved a failure, because it was not established on a scale or managed in a manner to make it interesting and useful to the public.

Mr. Gamble represented that in order to make an interesting show of the woods, fibres, oils, barks, fruits and other vegetable products of botanical or economic interest in the district, considerable space would be wanted, for the district and Wynaad contained such a varied flora ranging in level from that of the sea to over 8,000 feet and in comparative moisture from 23 inches (Coimbatore)* to 112 inches (Calicut).* He would hope that the museum might be made the means of fostering the use of indigenous timbers for building and construction, and of bringing to more general local notice woods and forest products of economic value. Government is always sending specimens to Exhibitions abroad and at the Presidency and it often happens that products while known at a distance are little known in their own home. The collection that would show all that it is right to exhibit would be by no means one of so little amount as Mr. Lawson seems to think. Nor is the zoological field less rich or varied.

Dr. Bidie pointed out that a collection of birds, of which the most common and most interesting should be stuffed and exhibited with their eggs and nests, would take considerable space, more especially as in such a district as this the game birds, always interesting where there is a large European community, are mostly of comparatively large size. So, too, a collection of the mammalia would be incomplete and devoid of interest if the game of the district were not well represented, and even such large animals as the bison and sambur would require to be shown and prove most interesting to visitors, for few people have any idea of their size, especially of that of the former. The reptiles, land shells and fish would also take up a good deal of room and so would the insects, if properly shown. Altogether he considered the space proposed to be quite inadequate to represent the branches of natural science which it is proposed to illustrate, not to mention economical products.

Mr. Burrows, while agreeing in the opinions of Doctor Bidie and Mr. Gamble, considered that in order to make a museum in Ootacamund a useful and successful institution and to ensure its permanency, it should be so arranged and managed as to prove an attraction to the public and a credit to the station. It should be accessible both to mere visitors and to learners and should be one of the public institutions of Ootacamund. In this we were all agreed. Ethnological collections, it was thought, in a district where there are several aboriginal races who might be likely to decrease in numbers rather than increase and to change perhaps their mode of life, would also be of real interest and require some space and some care in arrangement.

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* The nearest place on either side of which he could find record.

Then there would be a necessity for a series of specimens properly representative of the coffee, tea, cinchona, fibre and other industries of the district and Wynaad, and though Mr. Lawson thought that a small box of a few feet square would properly represent all that was useful to show as regards coffee, the rest of the meeting did not agree with him and thought that unless such subjects were thoroughly and well, perhaps even copiously, represented as regards the soil, growth, varieties, diseases and products of manufacture, the collection would be of but little interest and planters would not care for it.

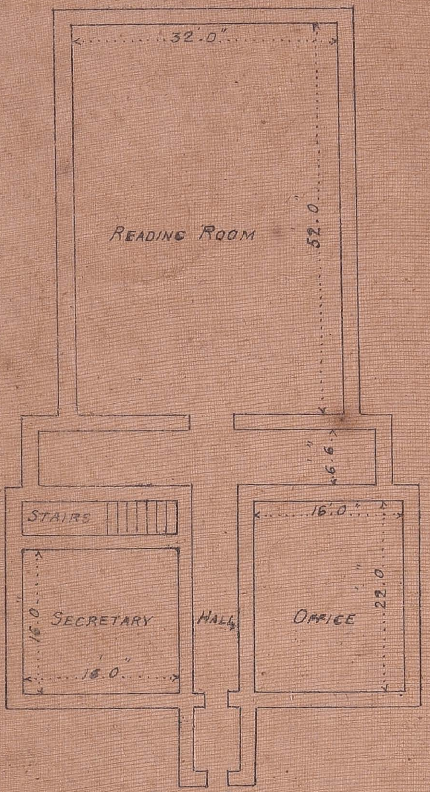
Then the Gold-mining industry and the various though not very extensive mineral products including the building stones, &c., require to be shown, and though perhaps in themselves they would not take up much room, yet they would add to the sum total of the space required and for this a wall space of 130 feet would be totally inadequate. And in Mr. Lawson's proposed room with three-feet cases, the space for the circulation of visitors would be reduced to merely 12 feet × 6 feet in each room. We were further agreed that if a museum be instituted in Ootacamund—as all were of opinion should be the case—it should be confined to the display of local products, and its aim should be that which in his address to the Biology section of the British Association at Swansea in 1880, Dr. Günther thus described :—

"The principal aim of a Provincial Museum ought, in my opinion, to be popular instruction. I do not mean that it should be merely a place for mild amusement and recreation, but that it should rank equal with all similar institutions destined to spread knowledge and cultivate taste among the people. To attain this aim it should contain an arranged series of well preserved specimens representing as many of the remarkable types of living forms as are obtainable; a series of useful as well as noxious plants and animals; of economic products derived from the animal and vegetable kingdoms; and last (but not least) a complete and accurately named series of the flora and fauna of the neighbourhood.

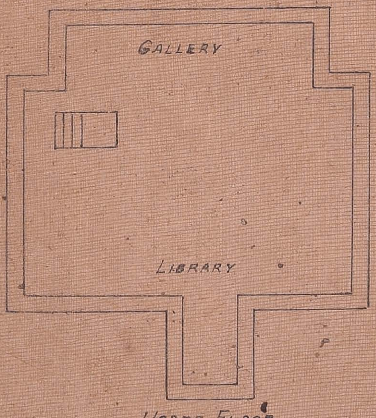
"The direct benefit of a complete collection of the flora and fauna of the district, in which the Provincial Museum is situated, is obvious and cannot be exaggerated. The pursuit of collecting and studying natural history objects gives to the persons who are inclined to devote their leisure hours to it, a beneficial training for whatever their real calling in life may be; they acquire a sense of order and method; they develop their gift of observation; they are stimulated to healthy exercise. Nothing encourages them in this pursuit more than a well named and easily accessible collection in their own native town upon which they can fall back as a pattern and an aid for their own. This local collection ought to be always arranged and named according to the plan and nomenclature adopted in some monograph of the fauna and flora of the country; and I consider its formation in every Provincial Museum to be of higher importance than a collection of foreign objects."

No such small room as that which Mr. Lawson proposed would meet the circumstances of the case as thus defined.

We are strongly agreed that if a museum is started it should be in a building worthy of it; that it should be constructed at once of sufficient size, but that cabinets might be made by degrees as collections were available. Dr. Bidie gave it as his opinion, in which Messrs. Burrows and Gamble were disposed to agree, that a building of the style of the Nīlgiri library would probably prove sufficient if re-arranged as regards the rooms. There should be a work room for the assistant in charge and a store and packing room at any rate. The library was visited in order to see what the size and arrangements were and a rough plan is given opposite. The arrangement seems well suited to a museum, the light is good and there is no reason why the large room should not have the gallery continued round it so as to display cases for insects, &c. Such a building would, of course, cost a great deal more than Mr. Lawson's proposed one, but it is our opinion that if the museum is not a good one, in a suitable building, contributors will not be easily persuaded to assist, its permanency will be doubtful, and it will not be, what it should be, a place of instruction to the public. Mr. Lawson's scheme would practically merely add a small museum to his office. Government has fine sites now for such a building in and about Stonehouse Park and the Government Gardens, quite near to Mr. Lawson's office, and if only the funds can be provided and the building started at once under the auspices of His Excellency the Governor, we feel sure it will be a success. The great interest taken by the native community in such institutions and especially in the fauna of the country is well known from the statistics of the Museums of Calcutta and Madras and of the Calcutta Zoological Gardens, and we feel sure that our Ootacamund Museum (which it may be hoped will prove a model for similar museums in other groups of districts such as were recommended by the Government of India in recent orders) will prove equally attractive.



Ground Floor.



Upper Floor

We would remark that it may possibly be considerably utilized in assisting the work of technical education for which the Director of Public Instruction is, we believe, now preparing a scheme under the orders and approval of Government.

There should be in the museum a small library of works of local interest, and the maps of the district should be exhibited on the walls for easy reference.

The orders of Government desire us to "work out the details of the proposed Museum with Mr. Lawson," but as we differ at the very outset from Mr. Lawson in our conception of what the museum should be, we are forced to submit this note, which we do through Mr. Lawson in order that he may obtain the orders of Government on the first point which has to be considered—the size, arrangement and scope of the proposed museum.

I have said above that I disagree with the views put forward by Dr. Bidie, Mr. Burrows and Mr. Gamble, and I therefore now pass on to point out what I conceive to be some of the more important errors of judgment contained in their report. Mr. Gamble thinks that all woods which grow in the country from Coimbatore to the uttermost parts of the Wynaad would prove of interest and instruction to the public, and that therefore all these should be exhibited; and he says, what is no doubt perfectly accurate, that such a collection would occupy a very considerable space. I dissent to Mr. Gamble's assertion that such a collection would be of great interest to anybody and for the following reason. Of the larger number of trees which grow in the above-mentioned district very little is known about the value of their timber, and to exhibit woods simply because they are woods without giving any information respecting them would be useless. I should prefer that at first a collection should be exhibited of such woods only about which we already possess some knowledge, and that the remainder should be added as Mr. Gamble or others become better acquainted with their properties. Again, with respect to the exhibition of fibres, oils, barks, fruits, &c., which it would be possible to bring together during the next few years, they would, I am persuaded, occupy a much smaller amount of room than is supposed by Mr. Gamble.

Dr. Bidie seems to me to err in wishing to see a Provincial Museum established upon the scale of a Metropolitan Museum. I would leave out for the present at any rate all such large animals as the elephant, the bison and the sambur, not because I think they would be of no interest to the public, but because they would take up room which could be more profitably utilized. I would observe again that all reptiles, with the exception of a very few, when prepared for exhibition pack into a very small compass. With respect to land shells and insects, except in the case of the more noticeable and commonest species, it is a mistake to keep them constantly exposed to the light, as they rapidly fade. They ought to be preserved in shallow glazed cases; and a complete collection of these branches of zoology would probably occupy no more room than what is represented by a couple of ordinary chests of drawers.

Mr. Burrows thinks that to insure the permanency of the museum it should be arranged and managed so as to prove an attraction to the public and a credit to the station, and to this end he would desire, with his colleagues Dr. Bidie and Mr. Gamble, to have a considerable space put at his disposal for the purpose of exhibiting specimens of the different aboriginal races who live upon the Hills, and who they say are likely to decrease in number and to change their mode of life.

I presume by this that they would exhibit specimens of Todas, Kurumbas, Kotas, Irulas and other tribes, together with the ordinary implements which they use in domestic life. Such a collection would no doubt be exceedingly interesting, but yet the interest be out of all proportion to the cost of establishing it. I would therefore let this branch of ethnology stand over to a future day like the elephant and the bison.

With respect to the room which would be required for exhibiting the chief points of interest connected with the coffee and tea industries they were shocked at the smallness of the amount which I proposed to allow. They would have everything copiously represented, while I would limit the quantity of each object to the smallest dimensions, compatible with its being instructive to the sightseer. Instead of a barrel of coffee, I would exhibit a pint of the berry in a bottle; and instead of a chest of tea, I would exhibit a quarter of a pound in a tray.

Next they quote an extract from Doctor Günther's well-known and admirable address on the subject of provincial museums and then say that "no such small room as that which Mr. Lawson proposed would meet the circumstances of the case as thus defined." This is quite true, but as the rooms which I proposed were never intended to hold complete collections, but only such as might be acquired during the first few years of the museum's existence, the observation is beside the mark. And, again, Dr. Günther is writing of what should be done in a country, the natural history of which is fully known, and where monographs of the different branches of natural history have been already drawn up; but this is not the case in India.

With their report Dr. Bidie, Mr. Burrows and Mr. Gamble give a plan for a building such as they think would be suited for the purpose of a provincial museum when finally stocked with its complete collections. To this plan I object, first, that it is unsuited in its construction and that it is wasteful of its space; secondly, that the cost of the building would be excessive; and thirdly, even if the two former propositions could not be proved, I object most strongly to the principle that we, who live now and as yet know most imperfectly all of the branches of the natural history of our district and therefore cannot possibly be fully acquainted as to the amount of room which will be required when our knowledge of them is more perfect, should saddle our successors with a building that may prove eventually to be inconvenient in construction or size.

It seems to me that it would be far better that we should begin with a small building of a construction of such a sort as is acknowledged by all authorities to be free from any radical defect, and which at the same time is capable of indefinite extension, than that we should block up all possibility of escape if our big building should prove faulty.

It was prominently stated at the meeting of the Committee, though this is not alluded to in the report, that one great advantage of expending a large sum of money upon a big building would be that, if hereafter the museum should fall into bad management, it would be more difficult for a hostile Government to abolish it than would be the case if its initial cost was less. To this I have to remark that I do not believe that any Government would be hostile to any well-managed museum, even if it was a small one, and that if it is not well managed, then the more hostile the Government is to it the better. Doctor Bidie, Mr. Burrows and Mr. Gamble say it is their opinion that, "if the museum is not a good one, in a suitable building, contributors will not be easily persuaded to assist, its permanency will be doubtful and it will not be what it should be, a place of instruction to the public. Mr. Lawson's scheme would practically merely add a small museum to his office." I entertain no doubt about being able to get plenty of assistance from contributors, even though they should be informed that their benefactions would be housed in a four-thousand-rupee museum and not in one which would cost forty thousand.

With respect to such a museum as I propose to build being merely an annex to my office, I would observe that it is true that I stated the museum should be in close proximity to the Government Gardens, inasmuch as I would, if Government approved, assume the chief control over its management. It seems to me that the Director of the Government Gardens will be always the person resident in Ootacamund, who is most likely to have had a previous training in the management of museums. But as to its being merely an addition to my office, such a preposterous notion never for a moment entered into my head. Of what possible use could collections of animals, of minerals and of Todas be in the office of the Government Botanist? An office collection of vegetable products brought together for the purpose of enabling the head of the department to identify and name specimens of plants or plant produce must be kept solely for that purpose and be absolutely distinct from all such collections as may be provided for the public entertainment.

This last point is one upon which I must particularly insist, as I find that in this country there are still those who think that the two purposes may be fitly combined. An office collection ought to contain every thing that may be required for thoroughly identifying any vegetable product that may be sent from any part of India, while the provincial museum should contain, as I said in my last year's report, such specimens only as would be illustrative of its particular district. So far then as the botanical part of the provincial museum goes, it would be the overflow of the office collection.

Whether or no a museum of natural history would subserve the purposes of technical education, I am not able to forecast; but I do not see that any relation necessarily exists between such a museum and a school where the principles or the art of manufacturing goods is to be taught, though of course with all their aspirations in the matter of technical education I fully sympathise.

Having now criticised the above report, I pass on to offer a plan for a museum and a scheme for its management, which I think will be found much more suitable than those proposed by Dr. Bidie, Mr. Burrows and Mr. Gamble, and one which I think might serve as a model for all future Provincial Museums in the Presidency.

The objects for which specimens from the different branches of natural history are collected are three, viz:—

(1) Collections made for the instruction of students in schools and colleges.
(2) Collections made for the use of specialists.
(3) Collections made for the instruction of the general public.

The first consists of a comparatively small number of carefully collected specimens, which are intended by the teacher to illustrate his lectures. Each teacher will make his own selection, and any collection, made for him by another person, will be comparatively worthless. With a collection of this sort, neither a Provincial nor a Metropolitan Museum has anything to do.

The second ought to take in every species and variety of all groups of plants, animals, minerals and geological objects which are to be found in the district. They should be so arranged that any specialist, wishing to study them, may have easy access to them. These, however, should not be exhibited to the general public, to whom the great majority of the specimens would be not only of no interest, but by their number would serve only to bewilder them. Complete collections of birds, shells, butterflies, beetles, for instance, should be packed in cabinets and not stuffed and arranged, as too often used to be done, in cases, occupying the greater part of the body of the museum.

The third kind of collection, viz., that which may be profitably exhibited for the instruction of the general public, is a small one when compared with that which is required for the specialist. Only those objects which are met with more or less in every day life should be exhibited—these ought to be carefully chosen, so as to show the chief points of interest about them, and they ought to be accompanied with descriptions clearly describing what these points of interest are.

Any museum then, which is established, should be so arranged as to meet the wants of the specialist and the general public, and certain definite rules have been adopted by all who have had experience of museums in England. These rules are—

(1) The construction of the building ought to be such that there will be, in those rooms which are furnished with glazed cases, no cross lights passing through them.

(2) The construction ought to be such that as much as possible of the wall and floor space of the museum may be available for cases and cabinets.

(3) The building ought to be of an unpretentious character, and free from all useless ornamentation. This, too, in order that money may not be lavished upon what is useless, but be wholly expended upon the, by no means uncostly, furniture and upon the collections.

(4) The building should be so arranged that it may be added to whenever occasion may require.

Now the plan which I offer below is the simplest expression of what a museum can be, which shall fulfil all the conditions enumerated above. Each block forms a perfect museum and consists of two oblong-rooms each lighted by four large windows on one side only. The whole of the remaining walls are available for cases, while in the centre of each room there is space for glazed counters for the exhibition of objects of interest to the general public; again underneath these cases there is room for the drawers and cabinets, which would contain the collections provided for the specialists. Whenever one block of buildings becomes overcrowded, all that is necessary in order to increase the accommodation is to break an opening in the blind end of the block and add a second series of rooms to this end; and this it is evident may be repeated indefinitely. All museums in this country ought to be built facing north and south.

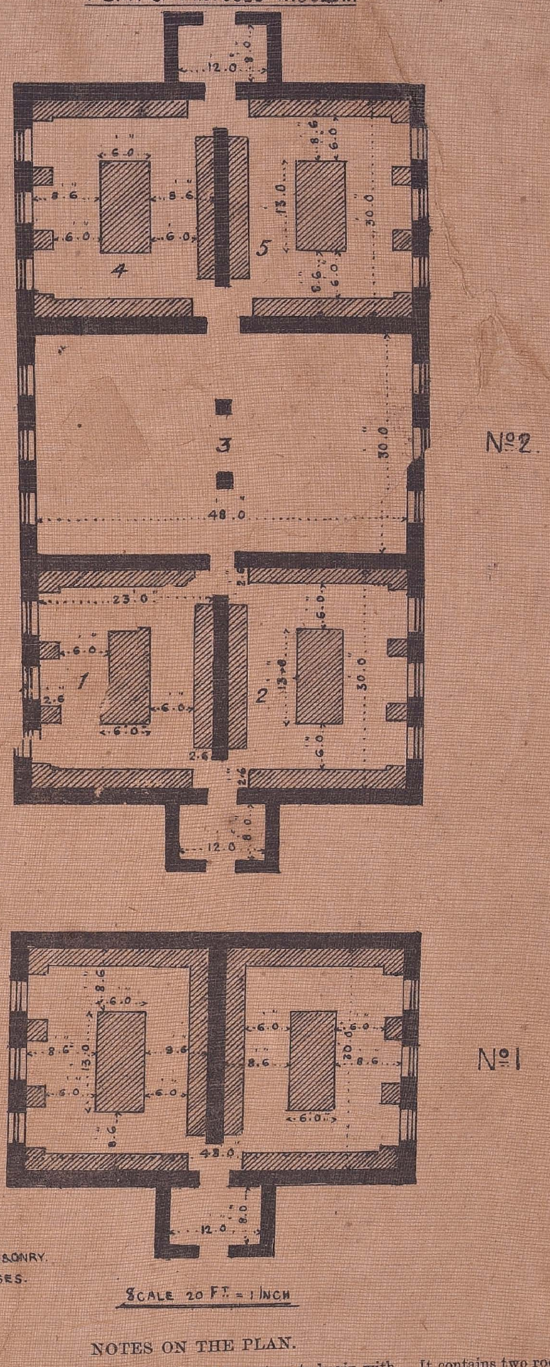
Management.—This is what I venture to say will be found the greatest difficulty attending the successful establishment of provincial museums. It is not reasonable to expect that Government or Municipalities will go to the expense of providing highly-trained Curators. Nevertheless if the museums are not supervised by persons who have had some training, they will inevitably be a failure. To guard against this I throw out the following suggestion.

The Apothecaries, who are attached to dispensaries in provincial towns, have often, I believe, a considerable amount of leisure time and they have all of them had a scientific education. Might not some of these, who have shown a predilection for the study of natural history, receive some special instruction in the management and arrangement of museums under the direction of the Superintendent of Central Museum at Madras, and then, by adding a small increment to their salaries, obtain the services of these gentlemen? This, it appears to me, would be the most economical and not an unsatisfactory way of attempting to dispose of the difficult question of supervision.

All such specimens as require, for their mounting or preparation, the hand of an expert, would be most conveniently obtained from the Central Museum of the Presidency, or from any person in the neighbourhood who may make taxidermy his profession. By this arrangement a permanent taxidermist could be dispensed with.

The provincial museums ought not to be regarded as distributing bodies, though, of course, they should be able to supply things special to their district, when called upon to do so by the Superintendent of the Central Museum at Madras.

PLAN OF PROPOSED MUSEUM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NOTES ON THE PLAN.

In plan No. I is the kind of building which I propose should be put up to begin with. It contains two rooms, each 30 feet × 23 feet, and the walls to the spring of the roof 13 feet. In the plan only three windows are shown, there ought to be four each 4½ × 9 feet.

No. II represents the Museum when fully completed in future years.

arr of the specimens would be as follows :—

Botany.
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ge specimens, *e.g.*, elephant, bison, &c., mounted on stands, and not enclosed in cases.
ology.
y and Mir alogy.

woul ut Rs. 5,000, and to fit it up properly with cases would cost at least another

Lastly, no institution of this kind can be expected to keep up uniform excellence unless it is from time to time inspected by a superior officer, and I would, therefore, suggest that it might very properly become a part of the duties of the Superintendent of the Central Museum to inspect and report from time to time upon all the provincial museums in the Presidency.

The views which I have expressed above, respecting the structure, arrangement and management of museums are not crude notions. They are the views of all who in England have given to this subject their serious attention, and are the outcome of those numerous meetings and discussions which took place at the British Association and elsewhere during the last decade.

VI. HERBARIUM.—The number of plants contained in the herbarium has been considerably increased during the past year, partly through collections made by myself in different parts of the Presidency and partly by collections sent by others. The thanks of Government are especially due to the following gentlemen for gifts of plants.

(1) *Mr. Gamble, Conservator of Forests, Northern Circle*, has been the chief contributor. The specimens which he has presented to the herbarium rank with the finest I have ever seen, for not only have they been superbly dried, but they always contain just those portions of the plant which are essential for its proper illustration. I am indebted also to Mr. Gamble for much information concerning the plants, which he has sent, in their living state, and I am still further indebted to him for having named certain genera for me with which he was himself specially well acquainted.

(2) *Mr. Talbot, Deputy Conservator of Forests in the Bombay Presidency*, for a very interesting collection of plants which he had made in the Northern Concan. The flora of this region, owing to its contiguity to the Madras Presidency, has a special interest for us. Mr. Talbot's plants have been well preserved and for the most part named.

(3) *Mr. J. Cameron, Curator of the Lal Bagh, Bangalore*, has sent several collections of plants growing in his neighbourhood.

(4) *Mr. Bourdillon*, for a selection of plants made in the neighbourhood of Trivandrum.

(5) *Mr. Hollingsworth, Apothecary and Assistant to the Professor of Chemistry in the Presidency College*, for specimens of named rare and critical species from the neighbourhood of Ootacamund and Madras.

(6) *Mr. Wedderburn, Assistant Collector*, for plants gathered in the neighbourhood of Devála and the Wynaad.

(7) *Captain Quentin Agnew*, for plants collected in the neighbourhood of Madras and also for a few collected about Quetta.

(8) *Sir Joseph D. Hooker, Director of the Royal Gardens, Kew*, for another consignment of named specimens from Dr. Wight's herbarium which was forwarded by him to Madras, and consisting chiefly of orders belonging to Calycifloræ and Corollifloræ. All these have been arranged and interpolated with those received the year before. This collection is now as extensive as it is valuable, and has been of great assistance to me in identifying the plants of the country.

The room, in which the herbarium is at present accommodated, is becoming inconveniently crowded, and I would therefore ask to be allowed to convert the old cinchona laboratory into a new repository for it. This building is dry and roomy, and the alterations which would be requisite would not be costly.

If Government approve of this suggestion, I will send in plans and estimates at once, as the alterations ought to be carried out during the next dry season.

VII. LIBRARY.—Only Rs. 42-15-3 were expended upon books last year, as it was thought that if the proposal to transfer the Madras herbarium to Ootacamund is carried out, a considerable saving might be effected by transferring also such botanical works as relate to purely descriptive botany.

VIII. NOTES ON SOME OF THE MORE INTERESTING PLANTS WHICH HAVE BEEN INTRODUCED OR GROWN IN THE GARDENS DURING THE YEAR.

1. Erythroxylon Coca.—Two big bushes of this plant exist at Barliyár where they grow freely, but fruit sparingly. About 60 young plants have been raised from seed and a large number of cuttings were put down during the winter, but these have not done well. It may be taken as certain that *Erythroxylon coca* will thrive well in many parts of Southern India, and that it may be easily propagated from seed, but that it will be profitable for the European planter to grow it upon a large scale is a matter upon which I entertain much doubt. Vast tracts of country in South America are cultivated with this plant, and an almost unlimited quantity of leaves may be obtained from that country for the purpose of manufacturing the valuable alkaloid *Cocaine*. Last winter this alkaloid is said to have fetched 2*s*. 6*d*. per grain. At this price, could it have been maintained, its cultivation would have been productive of enormous profits, but the price has since declined to 7*d*. per grain, and it is very unlikely that even this sum will be realized much longer. In this opinion Mr. Thiselton Dyer concurs, and he moreover wrote a short time ago to caution me against being too sanguine that the cultivation of Coca would be a commercial success, or advising me at any rate to discount very largely the reports which had been spread abroad about it.

Mr. Hooper has analysed three samples of the leaves taken from the bushes at Barliyár. In his first attempt to isolate the alkaloid in a crystalline state he was unsuccessful; in his second attempt he succeeded in obtaining the alkaloid as crystalline, but with an admixture of some acrid principle which rendered it useless as an anæsthetic; his third attempt ended in complete success, and the alkaloid manufactured by him has been used and approved of by Dr. Brockman in his surgical ophthalmic operations. Surgeon-General Doctor Furnell reports that the simple chewing of the leaves is productive of relief in cases of spasmodic bronchial coughs, and suggests that *Cocaine* should enter into the composition of cough lozenges. Mr. Hooper's analyses show that the leaves of the bushes grown at Barliyár are very rich in the alkaloid, as he extracted from them ½ per cent.

2. *Erythroxylon monogynum.*—The leaves of this plant are said to have been largely eaten during the famine by the natives of several districts where it grew wild in abundance, and it was thought probable that the leaves of this plant might be found to contain an alkaloid with properties similar to that which is obtained from the *Erythroxylon coca*; and Dr. Cornish just before he left India wrote to ask me to have the subject investigated. As the plant does not grow upon these Hills, I applied to Mr. Gamble for his assistance, and he has sent me several small consignments of the leaves, which had been collected and dried by Mr. Higgins, Deputy Conservator of Forests in the Cuddapah District. These consignments I handed over to Mr. Hooper, who, after his analyses of them, reports that they contain no anæsthetic property at all analogous to that which is found in *Erythroxylon coca*; but that they do contain a bitter and a tonic principle which may have mitigated the pangs of starvation.

3. *Taraxacum officinale.*—Sir Joseph D. Hooker in the Flora of British India observes that—"It is remarkable that this common Himalayan plant should not be found in the Khasia or Nílgiri mountains even as a garden escape." This reproach to these Hills is now removed, and the aggressive dandelion may be found advancing in all directions about Ootacamund. It bids fair to cover our lawns with its yellow blossoms as in England, while in the deeply tilled soil of the cinchona estates such an abundance of it with roots 18 inches long could be collected as would supply the wants of all the Medical Departments in India.

4. *Medicinal Rhubarb.*—There are a few plants of this herb in the gardens at Ootacamund and in Sim's Park at Coonoor, but they have not thriven as well as could be wished. I shall try this plant under varying conditions during the next year in the hope of obtaining better results.

5. *Hyoscyamus.*—This valuable medicinal plant, which can be grown very well upon these Hills, has not been raised in any quantities on account of all demand for it having ceased.

6. *Eucalyptus Globulus and other species.*—During the year 20 lb. of the oil of the leaves of the *Eucalyptus globulus* were sent to the Madras Medical Department. The last consignment was sold at the rate of Rs. 3-3-0—5 shillings per pound being the wholesale English quotation.

The processes required for the manufacture of the oil are very simple and inexpensive, and I think it is a pity that those who have large plantations of these trees should not endeavour to utilize them for this purpose as well as for fuel. The way to extract the oil is as follows:—

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The young shoots, having perfectly matured but not old leaves, are passed through an ordinary chaff-cutter and cut into chips not exceeding one inch in length; the smaller the chips the more readily is the oil extracted from them. These chips are then macerated in water over night and put the next morning into a still, which is kept boiling, till the greater part of the fluid has past over as vapor. This is then shaken up with a little common salt to cause the complete separation of the oil from the water; the oil is then decanted from the water and passed through a sheet of filtering paper, when it is ready for sale.

Instead of passing the leaves through a chaff-cutter, it would be better to pass them through some crushing machine, as the object is to smash up the hard cells, which surround the cavities into which the oil is passed by the secreting cells. I do not know of such a machine, but I should think that some modification of the old-fashioned mangle would prove effective.

Eucalyptus obliqua, *E. siderophloia*, *E. piperita*, and other sweet-smelling varieties, all of which are said to yield valuable oils, grow freely on these Hills; they are much more beautiful in their general aspect and their timber is greatly superior to that of the *E. globulus*.

7. *Rhus glabra.*—This is a febrifuge yielding plant, the seeds of which were sent from Kew. The seeds have germinated.

8. *Ipecacuanha.*—I regret to have to report that I lost a considerable number of *Ipecacuanha* plants during the last year. This was owing to my having forced the stock too rapidly during the winter. The number of plants, however, is being again increased as fast as possible and special care will be taken to prevent the recurrence of last year's catastrophe. I have been much disappointed with the growth these plants have made at Barliyár during the past year. That the Ipecacuanha will eventually prove a success I entertain no doubt, but I have to confess that I have still a good deal to learn about the best ways of cultivating it.

9. *Joannesia* (*Anda*) *Gomesii.*—This is a handsome tree, growing to the height of 50 or 60 feet and belongs to the natural order *Euphorbeacæ*. It is a native of Brazil where the bark is said to be used "as a certain remedy for diarrhœa brought on by cold," while the seeds are reported to possess powerful but safe purgative properties. I received seeds of this tree last autumn from Mr. Cameron, Curator of the Lal Bagh, Bangalore, who writes word that it flourishes well there. The seeds have germinated and young plants raised from them.

10. *Acacia homalophylla.*—This is the tree which produces the Australian violet wood. A small specimen fruited sparingly for the first time last year in the Government Gardens in Ootacamund. The climate here, however, seems to be rather too cold for its full development, but I should think that at elevations ranging from three to four thousand feet it would thrive well and might prove an important addition to our timber trees.

11. *Box.*—This at an elevation from 5,000 to 7,500 grows more vigorously than I have ever seen it do in Europe, and I have planted a small plot of ground near the Jail on the Dodabetta estate with the view of finding out if it may not be profitably grown to supply the wood engraver's trade.

12. *Castilloa elastica.*—The few plants of this rubber yielding tree, which were put out two years ago at Barliyár, are growing grandly.

Last winter I went down at the request of Major Campbell Walker, Conservator of Forests, Southern Circle, to inspect the nursery of Castilloas which had been formed in Mr. Ferguson's garden and to advise how they might be best increased. I found the plants in beautiful condition and growing vigorously and I was able to take from them about 150 excellent cuttings. These I planted myself in pots and plunged them in beds of soil which were also made under my direct supervision, and I gave minute instructions as to how they should be treated. Since that time it has been reported—*vide* G.O., No. 766, dated 25th June 1885, relating to a letter from Major Campbell-Walker—that although my instructions had been followed carefully, not a single cutting took root.

This is odd, for when the same instructions are carried out in the Government Gardens at Ootacamund the failures are less than 5 per cent. of the cuttings planted. The failure at Calicut would appear to have been due to a want of judgment in watering the cuttings in their early stage, before the cut ends had calloused over.

When the side shoots are used as cuttings, difficulty has often been experienced in getting the plants raised from these to form a leader and grow upright; they generally sprawl along the ground. To obviate this it is only necessary to cut the young plants back to about a foot from the ground when side shoots will be formed, any of which will of themselves produce a leader.

13. *Ceara.*—This fruits freely at Barliyár and the seed appears to be eaten by birds and deposited in the neighbouring jungle, for young plants have been found growing where they never had been planted by man. If this is so, we may look forward to the Ceara rubber tree becoming a denizen of our ghât forests.

14. *Mangosteens.*—These fruited very well last year at Barliyár and are again this year promising to yield a large crop. The Mangosteen is an extremely beautiful tree and gives a very dense shade. It ought to be grown all over the Presidency.

15. *Litchi.*—This too fruited freely last year at Barliyár; it grows readily from seed and like the Mangosteen deserves to be better known than it is at present.

16. *Carob tree.*—This thrives well both at Barliyár and at Kalhatti, but in both places the trees bear staminate flowers only.

17. *Acacia decurrens.*—This tanning yielding acacia is being grown successfully at Coonoor by private persons, and, I believe, also by Mr. Gamble. It grows fairly well at Ootacamund, but does not fruit. This is due probably to the wet gloomy weather coming at the time when it begins to flower. I have seen it growing magnificiently on the Palni hills where it flowers and fruits freely.

18. *Mahogany.*—Two casks of mahogany seed which had been received by the Kew authorities from Jamaica have just arrived in excellent order. I have distributed all but a few pounds of it; the greater amount going to the Forest Department and to the Agri-Horticultural Gardens at Madras.

19. *Edible Prickly-pear from Cyprus.*—Living specimens were sent to the Government Gardens at Ootacamund by the Director of Agriculture and Revenue Settlement last winter. The fruit had been highly recommended by Dr. Bonavia, Civil Surgeon, Etawah, North-Western Provinces, who thought it might be advantageously grafted upon the wild worthless prickly-pear of the plains. The plants arrived in fair condition and have been planted out at Kalhatti where they are doing so well that it does not seem at all likely that it will be ever necessary to have recourse to grafting them upon the wild plants.

20. The following plants mentioned in my last year's report are all doing well:—

Rhus vernicifera or the Japan Lacquer plant.
Rhus succedanea or the Japan wax plant.

Quilaja saponaria.—The latter was put out last year in the Government Gardens at Ootacamund. It was untouched by the winter frosts and is now more than six feet high.

The *Kumera Aracha* and *Cochin-China tuberous rooted vine* have also been planted out and are doing well.

21. *Waras.*—I was asked last year by Mr. Thiselton Dyer to obtain information for him about this dye. This I have done, and from specimens which I sent to Kew *waras* turns out to be the produce of *Flemingia Grahamiana* and *F. congesta.* With respect to the distinctive characters of these two species, I pointed out that after studying the plants in their living condition, I did not think them sufficiently constant to allow of the two species being kept separate, and in this opinion both Mr. Thiselton Dyer and Professor Oliver now concur. The *waras* yields a beautiful dye when applied to animal substances such as silk or wool, but it is inferior as a dye when used for the purpose of coloring vegetable products such as cotton or linen. Mr. Thiselton Dyer has kindly obtained for me a London expert's opinion upon the value of *waras* and I regret to say that it is not such as is likely to lead one to believe that it will ever become an object of commercial interests. I may mention that when I was in Madras last winter, I saw at the Agri-Horticultural Garden's flower-show a specimen of *waras* in a native dyer's collection which was being exhibited, and from which it would appear that *waras* is not unknown as a dye in India.

22. Mr. T. Hanbury has sent some three hundred packets of seeds from his garden in Italy. Most have germinated, and I shall hope to report upon the more interesting species next year.

IX. RECEIPTS AND EXPENDITURE.—*Receipts.*—The receipts for the last year amounted to Rs. 2,077-12-1 and were derived from the following sources :—

Sale of plants and seeds for the—	RS.	A.	P.
Government Gardens in Ootacamund	1,792	2	10
Do. in Barliyár	175	14	9
Do. in Kalhatti	14	8	0
Do. in Jalap tubers	7	14	0
Do. in Blue-gum oil	87	4	6
Total ...	2,077	12	1

The budget estimate was Rs. 4,300. There has therefore been a decrease in the receipts of Rs. 2,222-3-11, or less than half of what was expected has been realized. This is due partly to the small demand there was during the year for plants and partly to a large number of plants having been distributed gratis, which in former years would have been paid for.

Expenditure.—The total expenditure for the year has been Rs. 24,574-12-7 and is detailed thus :—

	RS.	A.	P.
Government Gardens, Ootacamund	18,597	9	6
Do. Barliyár	488	5	2
Do. Kalhatti	334	14	0
Medicinal Gardens	315	4	4
Sim's Park	1,820	8	5
Stonehouse Park	962	4	3
Church Hill Park	97	13	0
Upper Norwood	1,958	1	11
Total ...	24,574	12	7

The budget estimate was Rs. 25,450-8-0 ; a saving therefore has been effected of Rs. 875-11-5

X. MISCELLANEOUS INFORMATION.—(1) *Catalogue of Plants.*—A list of all the plants, which have been identified in the several Government Gardens, has been made. But no catalogue of them has been printed, but if Government should approve, this might be done next winter.

(2) *Establishment of a stall at weekly markets for the supply and wants of the local planters, gardeners, &c.*—This was proposed two years ago, but it does not now seem necessary to establish such a stall, as everybody, from the European residents to Badaga and Canarese gardeners, apply direct to the office at the Government Gardens for all such seeds and plants as they may require.

(3) *Value of Nilgiri peat as fuel.*—During the past year I have paid some attention to the manner in which peat is formed on these Hills and have experimented upon it, with the view of finding out what its value as a fuel may be. The peat on these Hills is formed entirely from plants belonging to the sub-kingdom *Phanerogamia* such as sedges and other marsh loving plants. There are no mosses which enter into its composition as is commonly the case in the northern and more temperate regions.

The value of the peat as a rule is very inferior to that found in northern countries, and this is apparently due not to any inherent badness of the plants which go to form the peat, but to the great admixture of inorganic substances which are blended with it. The cause of this admixture is due to the amount of soil which every year is carried down from the Hills during floods and spread over the surface of the peat forming swamps. There is, however, some which is very good, notably that which is commonly sold as fuel in Ootacamund by General Baker. This is little if at all inferior to the peat, which is obtained from the bogs of England, Scotland or Ireland. But of this good quality there is, so far as my investigations have gone, a very limited quantity.

(Signed) M. A. LAWSON,
Director.

Return of Seeds, Plants, &c., distributed from the Government Botanical Gardens, Ootacamund, Barliyár and Kalhatti, during the Official Year ending 31st March 1885.

Months.	Fruit Trees.		Timber Trees.		Ornamental Shrubs and Herbaceous Plants.	
	Number of Plants.	Value.	Number of Plants.	Value.	Number of Plants.	Value.
1	2	3	4	5	6	7
		RS. A. P.		RS. A. P.		RS. A. P.
April 1884	..	..	72	18 0 0	285	36 9 0
May ,, ...	..	..	12	3 0 0	51	12 1 0
June ,, ...	9	3 4 0	302	53 8 0	680	108 2 0
July ,, ...	40	10 0 0	191	49 6 0	341	65 12 0
August ,, ...	8	2 0 0	20	5 4 0	137	34 2 0
September ,, ...	41	6 8 0	..	..	132	38 11 0
October ,, ...	30	6 4 0	66	22 8 0	235	57 14 0
November ,, ...	138	34 8 0	64	16 12 0	670	45 14 0
December ,, ...	..	..	120	34 8 0	162	18 8 0
January 1885	..	..	..	..	88	20 12 0
February ,, ...	10	2 8 0	..	..	1,158	77 2 0
March ,, ...	..	..	149	38 8 0	32	10 14 0
Total ..	276	65 0 0	996	241 6 0	3,971	526 5 0

Months.	Vegetable Flower and other Seeds.		Bouquets and Cut-flowers.			Sundry Receipts.	Total.
	Number of Packets.	Value.	Number of		Value.		
			Bouquets.	Cut-flowers.			
	8	9	10	11	12	13	14
		RS. A. P.			RS. A. P.	RS. A. P.	RS. A. P.
April 1884	204	62 0 6	..	3	3 15 0	9 5 9	129 14 3
May ,, ...	279	73 5 0	9	17	21 6 0	8 2 0	117 14 0
June ,, ...	266	53 12 0	4	10	17 15 9	17 14 0	254 7 9
July ,, ...	205	62 11 9	3	4	8 14 0	48 12 3	245 8 0
August ,, ...	170	39 4 6	..	3	3 4 0	79 10 6	163 9 0
September ,, ...	105	22 12 3	2	28	32 10 0	35 4 9	135 14 0
October ,, ...	257	63 3 9	4	11	16 4 0	67 1 6	233 3 3
November ,, ...	118	38 15 9	..	6	0 12 0	42 8 0	179 5 9
December ,, ...	77	17 10 0	3	..	4 8 0	16 12 6	91 14 6
January 1885	22	7 5 0	2	1	4 4 0	17 7 6	49 12 6
February ,, ...	93	47 9 9	..	..	..	50 11 0	177 14 9
March ,, ...	183	78 1 6	1	5	14 2 0	69 8 4	211 1 10
Total ..	1,979	566 11 9	28	88	127 14 9	463 2 1	1,990 7 7

Meteorological Observations from April 1884 to March 1885, on the Government Botanical Gardens, Ootacamund.

Months.	Rainfall.	Days with Rain.	Days without Rain.
	Inches.		
April 1884	3·35	7	23
May ,, ...	5·20	12	19
June ,, ...	5·14	16	14
July ,, ...	1·87	12	19
August ,, ...	6·88	21	10
September ,, ...	3·03	17	13
October ,, ...	22·84	25	6
November ,, ...	10·22	21	9
December ,, ...	4·89	9	22
January 1885	...	...	31
February ,, ...	...	...	28
March ,, ...	·27	4	27
Total ...	63·69	144	221

Ootacamund,
5th September 1885.

(Signed) M. A. LAWSON,
Director.

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Statement showing the Receipts of the Government Botanical Gardens and Parks for the Official Year ending 31st March 1885.

——	Actuals, 1883-84.			Budget Estimate, 1884-85.			Actuals, 1884-85.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Government Gardens, Ootacamund.									
Sale of seeds, plants, &c.	2,185	15	4	3,000	0	0	1,792	2	10
Government Gardens, Barliyár.									
Sale of plants, fruits, &c.	134	14	0	600	0	0	175	14	9
Government Gardens, Kalhatti.									
Sale of plants, &c.	92	4	0	50	0	0	14	8	0
Government Medicinal Gardens, Ootacamund.									
Sale of jalap tubers, &c.	688	13	0	650	0	0	7	14	0
Total ...							1,990	7	7
Add value of drugs supplied to the Indian Medical Department, Madras	...			...			87	4	6
Grand Total ...	3,101	14	4	4,300	0	0	2,077	12	1

Ootacamund,
15th September 1885.

(Signed) M. A. LAWSON,
Director.

Statement of Expenditure on the Government Botanical Gardens and Parks, Nílgiris for the Official Year ending 31st March 1885.

Particulars.	Actuals, 1883-84.			Budget Estimate, 1884-85.			Actuals, 1884-85.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Pay of Curator	3,600	0	0	3,600	0	0	3,600	0	0
Travelling allowance of Curator	155	0	0	..			..		
Pay of Curator's office establishment	552	0	0	552	0	0	550	7	10
Total ..	4,307	0	0	4,152	0	0	4,150	7	10
Government Gardens, Ootacamund.									
Overseer and fixed cooly establishment	1,665	12	6	1,728	0	0	1,693	3	11
Temporary establishment	6,116	6	9	3,000	0	0	2,995	2	4
Acclimatization of foreign plants (G.O., No. 874, dated 5th July 1872).	699	8	10	500	0	0	500	0	0
Labelling of plants	53	2	0	550	0	0	415	14	11
Construction of cooly lines (G.O., 5th May 1884, No. 1848). ..	911	9	2	1,879	0	0	1,831	10	2
Contingencies	2,525	11	9	1,000	0	0	1,447	7	5
New works, Drainage	..			1,477	8	0	1,424	10	7
Horticultural implements	..			700	0	0	712	7	7
Painting of the conservatory green house and repairs to propagating house.	..			600	0	0	593	9	8
Cutting down and uprooting Eucalyptus and Acacia on the northern slope of the garden.	..			520	0	0	519	14	6
Purchase of meteorological instruments	..			200	0	0	108	3	0
Herbarium establishment	..			792	0	0	776	0	0
Purchase of cabinets and materials	..			800	0	0	785	15	4
Library	..			1,200	0	0	42	15	3
Repairs of certain damages done to the Gardens (*vide* G.O., No. 5719, dated 17th December 1884).	..			..			599	15	0
Total ..	11,972	3	0	14,946	8	0	14,447	1	8
Government Gardens, Barliyár.									
Temporary establishment	346	5	8	490	0	0	488	5	2
Government Gardens, Kalhatti.									
Temporary establishment	193	0	0	340	0	0	334	14	0
Government Medicinal Gardens, Ootacamund.									
Temporary establishment	317	1	6	350	0	0	315	4	4

STATEMENT of Expenditure on the Government Botanical Gardens and Parks, Nílgiris, for the Official Year ending 31st March 1885—(*Continued*).

Particulars.	Actuals, 1883-84.			Budget Estimate, 1884-85			Actuals, 1884-85.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Sim's Park, Coonoor.									
Temporary establishment and contingencies	1,732	3	5	* 2,072	0	0	1,820	8	5
Stonehouse Park, Ootacamund.									
Temporary establishment	591	7	0	1,000	0	0	962	4	3
Church Hill Park.									
Temporary establishment	72	8	0	100	0	0	97	13	0
Upper Norwood.									
Temporary establishment and contingencies	1,000	4	6	2,000	0	0	1,958	1	11
Total ..	20,532	1	1	25,450	8	0	24,574	12	7

* Including amount sanctioned in G.O., No. 843, dated 14th July 1884.

OOTACAMUND,
15th September 1885.

(Signed) M. A. LAWSON,
Director.

LIST of those to whom seeds or plants have been distributed during the year 1884-85.

Buck, Mr. E.C., Simla.
Bleehynden, Mr. R., Calcutta.
Bourdillon, Mr. T.F., Trevandrum.
Cherry, Mr. J.W., Salem.
Collector of Malabar, Calicut.
Chaplain of Wellington, Wellington.
Cameron, Mr. J., Bangalore.
Director, Government Cinchona Plantations, Ootacamund.
Director, Department of Agriculture and Commerce, North-Western Provinces and Oudh.
Edmiston, Mr. W.L., Kótagiri.
Fergueson, Mr. T.J., Calicut.
Fisher, Mr. W.R., Dehra Dún.
Gamble, Mr. J.S., Ootacamund.
Groves, Mr. F.A., Coonoor.
Griffith, Mr. T.R., Kótagiri.
Hooker, Sir. J.D., Kew.
Harvey, Messrs. A. and F., Virdupati.
Hamlin, Mr. E.H., Ootacamund.
Hadfield, Mr. G., Nilambúr.
Murray, Mr. G., Hosúr.
Morgan, General, Ootacamund.
Sheldrick, Mr. H., Nellakóta.
Sullivan, Honorable H.E., Ootacamund.
Sinclair, Mr. H.G., Guynd.
Schmid, Mr. T.W., Kótagiri.
Woodrow, Mr. G.M., Poona.

LIST of those who have been benefactors to the Gardens during the year 1884-85.

Abboy Naidu, T., Madras.
Agricultural Reporter to the Government of Madras, Madras.
Bourdillon, Mr. T.F., Trevandrum.
Cameron, Mr. J., Bangalore.
Duff, The Right Honorable Grant, Ootacamund.
Director, Government Cinchona Plantations, Ootacamund.
Fergueson, Mr. T.J., Calicut.
Griffith, Mr. T.R., Kótagiri.
Gamble, Mr. J.S., Ootacamund.
Hanbury, Mr. T., Italy.
Morgan, Mr. R., Calicut.
Superintendent, Agri-Horticultural Gardens, Madras.
Superintendent, Government Botanical Gardens, Calcutta.
Stone, Mr. O., Wellington.
Superintendent, Royal Botanical Gardens, Shibpur.

ORDER—dated 30th November 1885, No. 1329, Revenue.

Miscellaneous.

The Director submits his report for the year 1884-85 on the progress and condition of the Government Botanical Gardens and Parks on the Nílgiris.

2. *Season.*—The season was not generally favorable to horticultural operations, though the total rainfall was as much as 63·69 inches, the fall of the previous year having been 50·05. The weather was unusually dry up to October, when as much as 22·84 inches were registered in this one month, which caused some injury owing to the amount of wash occasioned. The winter was a mild one, with no severe frost.

3. *Botanical Gardens, Ootacamund.*—Considerable improvements were made during the year in the gardens, the upper part of which, lying between Government House and the Garden cottage, was entirely re-made and planted. The suggestion of the Director that the right-hand bank of the road, leading to Government House, should be built up with a loose revetment is approved. Nothing has yet been done towards the establishment of an experimental kitchen garden. The nurseries have been filled up with plants, raised for the purpose of replanting the demolished sholahs in the upper part of the gardens, and for experimental purposes. It seems the best course to permit the conservatory, facing the entrance gates, to remain standing as long as it is serviceable; when this is no longer the case, it will, as suggested by the Director, be pulled down and rebuilt in some other more convenient spot. The other buildings in the garden are reported to be in a good state of repair. Almost the whole allotment for the construction of cooly lines (Rs. 1,879) was expended. Opportunity was taken, when repairing the bund of the tank below the bandstand, which gave way during the heavy rain in October, to lessen the depth of the tank and strengthen the bund. A fountain will be constructed in the tank during the cold weather.

4. A list of all the plants, which have been identified in the several Government gardens, is reported to have been made. The catalogue should be printed as soon as possible.

5. *Government House Gardens.*—Satisfactory progress was made in clearing the scrub and regrassing the slopes in front of the house, and a green-house was built for the purpose of growing decorative plants.

6. *Stonehouse Park.*—The trees planted in October 1884 are reported to be doing well, though some destruction was caused during the year by cattle. It will not be feasible to enclose the park during the coming year with fencing and such other precautions against cattle, as are possible, should continue to be taken.

7. *Sims' Park.*—The usual necessary repairs were carried out during the year and a new bridle-path is now being made through the sholah, which was added in the previous year to the park. The path will be a great convenience for persons going to and fro between Coonoor and Wellington.

8. *Barliyár.*—Much useful work appears to have been carried out in the experimental garden to which about one acre, which has been cleared of useless overgrowth, has been added. Most of the trees in the garden are reported to be flourishing.

9. *Kalhatti.*—The Director states that the year's experience in this garden has confirmed his opinion that it is not worth the while of Government to continue operations here. In a recent order, the Government have called upon the Director to report upon various localities suggested as suitable for the establishment of Botanical Gardens, and upon receipt of his reply, final orders will be passed regarding the further maintenance of the Kalhatti garden. A garden should, no doubt, be established at Gúdalúr and also at Calicut. It is noted that the Director intends visiting the latter place for the purpose of choosing a suitable site.

10. The subject of the proposed museum for Ootacamund, dealt with at considerable length by the Director, should have furnished matter for a separate communication. The report now under review should have been confined to recording the salient features of progress during the year. The Government agree with the Director in considering that the cost of the building proposed as a museum by Dr. Bidie, Mr. Burrows, and

Mr. Gamble would be excessive, and for this reason, if for no other, their propos must be negatived. The Director should obtain and submit plans and an estimate f the building suggested by him, when final orders upon the subject will be passe A definite site for the building should be selected, which need not, necessarily, be i immediate proximity to the Government Gardens. The essential point in the buildin should be its ready adaptation for extension. The Government are much indebted t the Collector, Dr. Bidie and Mr. Gamble for the trouble they have taken in discussin the question which was submitted to them. Financial considerations, however, preven the Government from sanctioning the erection, at present, of such a spacious buildin as that suggested by them.

11. The number of plants in the Herbarium, owing to the kindness of variou contributors, considerably increased during the year. The Government are muc indebted to the various gentlemen who kindly forwarded specimens to Mr. Lawson Sanction is accorded to the suggested alteration of the old cinchona laboratory and its use, in the future, as a building for the accommodation of the Herbarium. Plans and estimates should be submitted as soon as possible.

12. *Special Products.*—It seems clearly established that the *Erythroxylon coca* will thrive very well and can be easily propagated from seed in many parts of Southern India. The price of the alkaloid manufactured from this plant has however declined from 2*s.* 6*d.* to 7*d.* per grain during the year, and it seems very doubtful whether its cultivation here could ever be a commercial success. The alkaloid has been successfully manufactured from the plant by the Government Quinologist and used and approved of by Surgeon-Major Drake-Brockman in his ophthalmic operations. The analyses made show that the trees grown in Barliyár are particularly rich in the alkaloid. Specimens of the *Erythroxylon monogynum* which is common in many districts of the Presidency and which has been used, at times of scarcity, as an article of food, were analysed and found to contain no anæsthetic property analogous to that met with in *Erythroxylon coca* but to possess a bitter and a tonic principle, which would mitigate the pangs of hunger.

13. In the review on the report for the previous year, it was noticed that no information was afforded regarding *Taraxacum*, medicinal rhubarb, and *Hyoscyamus*. The Director now reports that the *Taraxacum officinale* is advancing in all directions about Ootacamund. It is unnecessary to pay any further attention to its special cultivation. The plants of the herb producing the medicinal rhubarb have not thriven as well as could be wished. Mr. Lawson promises to make further experiments regarding them. The *Hyoscyamus* can be grown easily on the Hills, but the demand for the plant has ceased.

14. The report contains very interesting information on the processes required for the manufacture of oil from the various varieties of Eucalyptus. The consignment of oil from the leaves of *Eucalyptus globulus*, which was sent to the Madras Medical Department, was sold at the rate of Rs. 3-3-0 per lb., 5 shillings per lb. being the wholesale English quotation. The medicinal use of the oil, made from the various varieties of the Eucalyptus, is, it is believed, rapidly spreading. A paper on the uses and virtues of the oil extracted from the Eucalyptus was recently widely circulated by the Director of Agriculture.

15. The experiments made in the growth of Ipecacuanha during the year were not successful. The number of plants is, however, being increased, and, with further experience, the Director has no doubt that the cultivation of the plant will prove a success.

16. Seeds of the *Joannesia* (*Anda*) *Gomesii* received from the Curator of the Lâl Bagh, Bangalore, were planted during the year and young plants raised; the bark of the tree is said to contain useful medicinal properties. A valuable timber tree, the *Acacia homalophylla*, which produces the Australian violet wood, fruited for the first time during the year. It would probably thrive well at elevations between three and four thousand feet. The *Castilloa elastica* continues to grow very well at Barliyár. The Ceara plants fruit freely and young plants are now found growing where they

must have been sown by birds, and it may from this be hoped that the tree will become a free grower in the ghât forests.

17. The mangosteen, *Garcinia Mangostana*, and litchi, *Nephelium litchi*, fruited freely in Barliyár: both these trees, which are so valuable for their fruits, should be widely cultivated. There is no doubt they would succeed admirably in many parts of the Presidency. A good report is given of the following:—*Rhus vernicifera*, *Rhus succedanea*, *Quillaja saponaria*, *Kumera aracha* and the Cochin China tuberous-rooted vine. The report contains some useful notes on *waras*. The dye was not very favorably reported on when tried in England by Mr. Thomas Wardle (G.O., 25th September 1885, No. 1096).

18. The receipts for the year amounted to Rs. 2,077-12-1, compared with Rs. 4,300, the estimate in the budget for the year. The decrease is accounted for by the gratis distribution of plants which, had the practice of former years been followed, would have been sold. The expenditure amounted to Rs. 24,574-12-7, or Rs. 875-11-5 below the estimate. The saving occurred, principally, in the allotment made for the purchase of cabinets and materials; on the whole, the budget allotments were closely followed.

19. *Miscellaneous.*—There seems to be no object, at present, to be gained by the establishment of a seed stall for seeds in the market at Ootacamund. It is well known that seeds are offered for sale at the Government gardens. The remarks of the Director regarding Nílgiri peat have been noted with interest.

20. His Excellency in Council has much pleasure in again congratulating the Director on the progress made during the year, and notes the remarks he has made in appreciation of the services of the subordinates employed.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Director of Government Cinchona Plantations, &c.
,, the Director of Revenue Settlement and Agriculture.
,, the Board of Revenue.
,, the Accountant-General.
,, the Superintendent, Government Central Museum.
,, the Surgeon-General with the Government of Madras.
,, the Public Works Department.
,, the Financial Department.
,, the Honorary Secretary, Agri-Horticultural Society, Madras.
,, Deputy Surgeon-General G. Bidie, M.B., C.I.E.
,, the Honorary Secretary, Wynaad Planters' Association.
,, the ,, Nílgiri ,,
,, the ,, Yercaud ,,

Exd. W. H. French.

200 Copies.

Govt. of {1885} Madras.

REVENUE.

Issued

Recd. Encl.

G.O., 30th November 1885, No. 1329

NOVEMBER.

Government Botanical Gardens and Parks.

Reviewing annual report of — for 1884-85.

No. 138

Communicated to the Officers in charge of Settlement arties and to the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 18 January 1886.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No. iii
„ Special Assistant Collector, Nilgiris and Malabar.
„ Inspector of Cattle Diseases.

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23 JAN 86

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4th December 1885, No. 1342, Revenue.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following paper :—

From Deputy Surgeon-General G. BIDIE, M.B., C.I.E., Superintendent, Government Central Museum, to the Secretary to Government, Revenue Department, dated Madras, 10th October 1885, No. 675A :—

Abstract.—Submitting the report on the working of the Government Central Museum for 1884-85.

Enclosures.

ADMINISTRATION REPORT OF THE GOVERNMENT CENTRAL MUSEUM FOR THE YEAR 1884-85.

Statistics of Visitors.—The influx of visitors was very satisfactory, the total number having been 272,968, against 242,514 in 1883-84 and 234,501 the average for the past five years. Another satisfactory feature was the increase in female visitors as, of the total attendance, 43·92 per cent. consisted of women and girls, against a percentage of 40·41 in the previous year. This increase probably indicates some relaxation of the custom of seclusion, and an increasing interest on the part of females in things beyond, and different from, their ordinary surroundings. The number of men and boy visitors was in the proportion of 56·08 per cent. of the total, against 59·58 in 1883-84. Of the general visitors 19·33 per cent. against 22·13 in the previous year wrote their names in the door-keeper's book. This falling off may have been due to the circumstance that the regular door-keeper was, for a considerable time, absent on account of sickness, and the substitutes who conducted his duties may not have been so careful or expert in getting visitors to sign. The usual special arrangements were made for the visits of *Gosha ladies,* but I regret to say the attendance was very meagre, having been but 53 against 54 in 1883-84. The general visitors, as usual, consisted largely of strangers from up-country and although sometimes a little noisy on crowded days, it is most creditable to them that they never gave any trouble or wilfully injured anything in the slightest degree. The usual tables are appended giving details of the numerical results, &c., as regards visitors.

2. Museum Grounds.—The drinking fountain got out of order owing to leakage, and I was credibly informed that many visitors object to it, owing to the resemblance that the discharge of water from the mouth of a stone-ware lion's head has to the act of emesis! Considerable damage was done to some of the avenue trees by the cyclone in November. Some trees of *Diospyros montana,* Roxb., raised from seed, imported from the Andamans, flowered and fruited. A further supply of Mahogany plants was also raised from seeds presented by Dr. G. King, of the Botanical Gardens, Calcutta. The Mahoganies already planted out are all thriving. The grove of Neem trees to the north of the Museum, put down about nine years ago in soil excavated from the foundations of the new library and lecture hall, grows very slowly, but will in course of time afford the desired shade for visitors, who seem to like to rest under trees after going through the rooms in the Museum. The plot of self-sown trees conserved on the south side of the buildings is very promising, and some of the specimens, notably those of *Albizzia Lebbek,* Benth, are attaining a large size. Roads and culverts were kept in good order.

3. Buildings.—The general repairs of the buildings, in progress last year, were completed. The new roof of the large hall, which contains the specimens of birds and mammals and the new ethnological gallery, leaked somewhat during the unusually heavy rains of the north-east monsoon, but the defects were attended to by the Executive Engineer. In the Head Taxidermist's quarters, which were before low, damp and unhealthy, the floor was raised, the roof renewed and given a greater slope, and various other needful alterations effected, so that they are now substantial and comfortable. A new external wooden ladder was put up at the Superintendent's quarters, the old one having been in a dangerous state. Some other repairs are required in these quarters, and the Engineer was asked to have them executed so as to have the house ready for occupation by the new Superintendent on his arrival from England.

4. **THE AMARAVATI SCULPTURES**, the receipt of which was noticed in last year's report, were erected in the *Antiquity room* and form very conspicuous and attractive additions to the Museum. The most of the marbles received belonged to the outer rail of the tope, and an attempt was made to set them up in a position similar to that which they probably occupied in the original structure. This, owing to their brittle nature, great weight and mutilated condition was a task of much difficulty and caused some anxiety, but all difficulties were successfully overcome by the care and skill of Lieutenant-Colonel Morant, R.E., who took very great interest in the work. Of the sculptures of the inner rail only one large stone and some fragments were received, and with such materials it was impossible to attempt the restoration of any part of the outer rail. Accordingly, the large sculpture was set up in a favorable position as to light in the wall of the room, and enclosed in a handsome teak frame which will permit of the carving being covered with glass should that at any time hereafter seem necessary. This specimen of the Buddhist sculptor's art is by far the finest and perhaps the most interesting of any hitherto recovered from the ruins of Amarávati. It measures 5 feet 8 inches by 5 feet 6 inches and gives in bold relief a representation of the dagoba and its rails in their pristine glory, so that it is extremely valuable from an archæological as well as artistic point of view. Of the slabs which adorned the lower part of the dagoba itself only a few were received, and these were put up on a brick-work structure shaped so as to give some idea of their original position. The tope of Amarávati was probably erected early in the 4th century of the Christian era, and some of the slabs have carvings on the back which show that they belonged to some structure of much older date. The finer sculptures now existing were evidently executed by artists from Northern India, and show traces of classical influence. When Hiouen Thsang, the Chinese pilgrim, visited the place in A.D. 639, the tope still existed in its original splendour, although it had been deserted for a considerable time. Its destruction must therefore have been begun at a later date, and for a long period it has been in a state of absolute ruin. The remains are now, however, carefully guarded by Government, and an interesting monograph on them, by Dr. Burgess, C.I.E., of the Archæological Survey, has been published at the Government Press.

5. **CATALOGUE.**—Very little was done in this direction beyond collecting materials for catalogues of the departments of Ethnology and Antiquities. Additional matter was also added in MSS. to the catalogue of coins, with the view to a new edition. A catalogue of birds will be put in hand as soon as the collection of additional specimens, which Mr. Davison has been commissioned to make is completed.

6. **POPULAR LECTURES.**—My own engagements, I regret to say, did not permit me to give more than one lecture during the year, and I was disappointed in getting volunteers. In fact most of the scientific men at the Presidency have so much work on their hands that they can rarely spare the time to give popular lectures, however willing they might otherwise be to assist. The subject of the lecture given was Coca, the new planter's product, drug and beverage.

7. **CURRENT WORK.**—The following are a few of the various subjects which engaged the attention of the Museum staff during the year.

8. *Pearl Fisheries.*—The report of the officer deputed to inquire into the failure of the fisheries was referred to the Museum, for remarks on the questions of Natural History dealt with.

9. *Erythroxylon Coca.*—The Coca plant is very much at home in Madras, thrives well in the ground and seeds very readily, so that from the seeds of a specimen raised from the original stock brought out by Mr. Cross, we were able to propagate it freely. Just before public attention was so much attracted to it by the discovery of the wonderful therapeutical effects of *cocaine*, we sent home to Kew and the Pharmaceutical Society specimens of the dried leaves prepared in Madras, being desirous to ascertain their commercial value. These consignments led to a good deal of correspondence with various parties in London interested in the subject and ultimately also with planters in India. Plants of the Coca were supplied to the Botanical Gardens, Calcutta, and also to the Laul Bagh, Bangalore. From the fact that during the famine the starving poor were accustomed to eat the leaves of the indigenous species, viz., *Erythroxylon monogynum*, Roxb., I was then led to suggest that probably that plant contained some active principle similar to that of Coca. With the view to test this a supply of the leaves was recently submitted for analysis to an eminent analytical chemist in London.

10. *Musa textilis.*—Plants of this were got from the Saidápet Farm and forwarded to the Calcutta Botanical Gardens. Subsequently a report on the result of the experiment was received and duly forwarded to the Superintendent of the Farm.

11. *Cochineal.*—In last year's report it was mentioned that the trial was to be continued by Mr. Grimes, and with the view to assist him in the interesting experiment supplies of two species of spineless cactus were sent up from the Museum to Coimbatore.

12. *Heads of Poisonous Snakes.*—At the suggestion of Mr. Lawson a supply of cobras' heads was forwarded in spirit to Professor Mosely of Oxford, for class demonstrations.

13. *Live Snakes for the Zoological Society of London.*—At the request of the Secretary a collection of these was made for the new Reptile House of the Society, but although they were kept in specially prepared cages which precluded all risk of escape, no steamer agent would consent to carry them in case of a panic amongst the passengers or crew. The attempt had therefore to be abandoned.

14. *Barilla.*—The Commissioner of Salt Revenue made inquiries regarding the manufacture of Barilla in India, and all available information on the subject was duly furnished. Subsequently the Director of Revenue Settlement and Agriculture made inquiry regarding the species of *Salsola* found in Southern India, and a list was forwarded.

15. *Poisonous Plant.*—The Chemical Examiner forwarded, for identification, specimens of a plant said to be used as a cattle poison which, as we could make nothing of them locally, were submitted to the Kew authorities who were good enough to inform us that they belonged to *Lebedieropsis orbicularis.*

16. *Works on Numismatics.*—As the subject of Indian Numismatics now comes within the scope of the Madras University curriculum, a leading educational authority asked as to books on the subject suited for students. The list given in reply was of course a meagre one, as the information is chiefly scattered in periodicals and monographs.

17. *Burmese Fruit used as a scrubbing brush.*—While travelling in Burma I noticed in several bazaars an article, which was evidently a fruit split in halves, being sold as a scrubbing brush. It was of an oblong shape, some 4 or 5 inches long, flat on the split side and convex on the natural surface and armed with stout bristles sufficiently strong to remove paint and tar from wood, &c., with wonderful celerity. Local inquiries failed to get any information as to its source, and it was therefore sent to Kew, where Dr. Dyer at once identified it, and finally informed me that it is the fruit of a species of *Pandannus*, probably *fœtidus*, with the cellular tissue removed by maceration. Subsequently, a sample of the fruit was sent to Mr. T. Christy, who reports to me that he thinks he can make valuable commercial use of it, provided he can only get it in quantity and in good case.

18. *Syllabus of Economic Entomology.*—A syllabus of this subject was prepared and furnished to an Educational Committee engaged in compiling for the Technical education scheme draft syllabuses on various subjects for the guidance of students and examiners.

19. *Honey-bees.*—At the request of Government, a series of wild bees of Southern India was sent to Mr. Douglas from the collection named by Mr. Kirby of the British Museum.

20. *Coins collected by Mr. Sewell.*—A number of copper coins collected by Mr. R. Sewell in the Chingleput district was sent to Mr. Thomas, F.R.S., the Editor of *Numismata Orientalia*, to be placed, if necessary, at the disposal of the veteran and distinguished Numismatist Sir W. Elliot, who is engaged in the publication of the section on South Indian coins.

21. *Protection of Wild Birds.*—In 1881, I brought to the notice of Government the great destruction of wild birds which had been going on for some time, and pointed out the necessity for their protection in the interests of the ryot and planter. The Local Government were good enough to take a favorable view of my representations, but the Government of India refused to consider or legislate on the subject. Of late, however, Mr. H. R. Elliot, formerly a planter in Mysore, has brought the matter to the notice of the India Office, and has been directing the attention of the English public to the importance of the subject in the columns of the "Times." It is to be hoped, therefore, that some measure may soon be brought into force to prevent the slaughter now going on for the sake of the feathers of these useful denizens of the fields and woods. I have not the smallest doubt that the loss of crops so often experienced by the ravages of insect pests is, to some extent, due to the diminished numbers of insectivorous birds, and that the evil will go on increasing unless steps are taken to protect and encourage them.

22. *Cardamom Culture.*—Some information was supplied as to the mode of culture and fructification of this plant.

23 *Census of South Indian Art Industries.*—The Superintendent of the School of Arts was deputed to make a tour in the Southern Districts and collect data as to the present condition of the art industries still existing. In the course of his tour a collection was made—chiefly of textile fabrics, with some brass ware and other articles—which was sent to the Museum to be reported on, and opinion given as to the advisability of extending the tour to other districts and making further collections. A report was duly submitted and the articles returned to the School of Arts.

24. *Scheme for the Promotion of Industrial Arts.*—Preliminary lists of South Indian art industries were drawn up from reports furnished through the Board of Revenue by Collectors and submitted to the Government of India. The proof copy of the chapter on art and industries in the Madras Manual of Administration was also overhauled and additions made to it.

25. *Japan Lacquer-tree.*—A supply of seed of this valuable tree was received from the Calcutta Botanical Gardens and distributed to planters. No reports have been received as to results, but some seed put down in the Museum garden failed to germinate.

26. *Oxford Institute.*—Further specimens were despatched and the collection of others was in progress. A number of articles purchased from the Madras Court at the Calcutta Exhibition by a private individual and left, at the request of the purchaser, in charge of an Exhibition officer was by mistake presented by him to the Oxford Institute. After much correspondence the destination of the missing articles was ascertained, and the gift to the Institute confirmed in the name of the Government of Madras.

27. *Government Mineralogist.*—The newly appointed Government Mineralogist arrived, and was for some days engaged in examining the mineralogical collections in the Museum. His report on the present condition of the collection will be found in G.O., Public Department, Mis. No. 1349, of 10th June 1885.

28. *Exhibitions.*—Owing to the pressure of work connected with the London and expected Bombay Exhibitions, the Government, at the suggestion of the Exhibition Committee, declined to contribute to the Exhibition in Antwerp. The Government of Bengal had not up to the close of the year adjusted the large balance due by them on articles purchased from the Madras Court at the Calcutta Exhibition, and the delay was causing considerable inconvenience. The tardy distribution of medals gained at this Exhibition was also causing great dissatisfaction, and numerous complaints were being received on the subject from exhibitors.

29. SPECIMENS ACQUIRED.—The total numbered 7,619 against 9,734 in 1883-84. The acquisitions in the latter year were, however, greatly increased by unusual contributions of insects and plants.

30. *Mammals.*—The number received amounted to 37 against 58 in the previous year, of which 21 were presented and 16 purchased. Two fine stuffed heads of *Tetraceros quadricornis* were purchased at the Calcutta Exhibition; and Mr. Ditmas of the Salt Department deposited on loan a head of the "Bison," *Gavæus gaurus*, which with one exception is the largest known. We were also fortunate enough to secure, through Mrs. Etty, a specimen from Coorg of that somewhat rare animal the long-tailed spiny mouse, *Platacanthomys lasiurus*, the fur on the back of which is mixed with sharp flat spines. It was originally discovered in the hills of Travancore, and until now I am not aware that it has ever been seen elsewhere. As usual some good specimens of animals were got from the menagerie in the People's Park, the gift of the President of the Municipal Commission.

31. *Birds.*—The acquisitions numbered 121, of which 32 were presented. Mr. Davison, the well-known Indian Ornithologist, was, at the suggestion of His Excellency the Governor, engaged * for a period of six months, commencing from the 1st February 1885, to make a collection of South Indian birds for the Museum, but the first consignment had not arrived at the close of the year.

It is proposed, as Mr. Davison's birds are received, to prepare for public exhibition fresh mounted specimens of the typical birds of each family, in natural attitudes and with suitable surroundings. The existing collection on view in the cases is very old and bad, although the best that could be got at the time.

32. *Eggs and Nests.*—Of these, 28 new specimens were received, of which 17 were presented.

33. *Reptiles.*—The additions numbered 93, of which 70 were presented. The most liberal contributor was Mr. Ditmas, already mentioned, who gave us 36 snakes and 2 lizards from the Wynaad district. Dr. Shortt also, as usual, sent a number of valuable specimens. A large live *Hydrosaurus salvator*, Laur., was presented by Mr. W. W. Aspinwall of the *S.S. Secundra* and transferred to the People's Park where it still thrives.

34. *Fish.*—During the year we acquired 38 against 81 specimens in 1883-84. Mr. J. M. Mitchell sent a collection, and Dr. Sturmer contributed a number of fish parasites.

35. *Shells.*—The total acquisitions numbered 622 against 304 in the previous year. The chief contributor was the Assistant Curator, who presented altogether 600 specimens.

36. *Crustacea.*—The additions numbered 28, all of which were presented by our good friend Dr. Shortt. *Arachnida*: Mr. Carter sent a specimen of an, apparently, amphibious scorpion but living by preference in water! This, so far as I know, is the first sample of an aquatic scorpion.

37. *Echinodermata.*—One star fish was presented and one specimen belonging to the zoophytes.

38. *Insects.*—The total acquisitions numbered 2,208 against 1,240 in 1883-84, and of these 620 were presented. The chief contributors of gifts were the Curator Mr. W. F. Dique, and Mr. E. H. Sneyd.

39. *Herbarium.*—A magnificent collection, numbering 1,342 specimens, was received from the Royal Gardens, Kew, through Her Majesty's Secretary of State for India. The total acquisitions for the year amounted to 1,367.

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* G.O., Public Department, Mis. No 2740, of 19th December 1884.

40. *Raw Produce and Manufactures.*—Some good specimens of the art-ware of the Punjab and other parts of Northern India were acquired by purchase at the Calcutta Exhibition. His Excellency the Governor presented fine specimens of the fruit of *Vateria indica*, as also of the resin and of the candles made from the plant on the Malabar coast. Dr. Bidie brought from Burma specimens of the cigars used by the common people there. They are made of chopped tobacco and chips of the wood of *Streblus asper*, wrapped like a cigarette in the leaf of a species of *Cordia*. This, so far as known, is the only instance of the general use of cigars of tobacco containing an extraneous article. They are of large size and somewhat pungent, but are in constant use by both sexes and people of all ages from mere children. The total number of articles added under this head amounted to 80, of which 68 were presented.

41. *Geology and Mineralogy.*—The gifts numbered 52, and one of the most remarkable of these was a specimen of pumice stone found floating as drift on the Malabar coast, and supposed to be part of the results of the recent violent volcanic disturbances in the neighbourhood of Java. Mr. Bruce-Foote presented 35 specimens of minerals, Mr. O'Farrel, C.S., sent eight rock specimens from Narsapatnam, and Mr. H. W. Bliss forwarded a fine specimen of gypsum from the Runn of Kutch.

42. *Ethnology and Antiquities.*—The chief transaction of the year was the erection of the Amarávati marbles which has been alluded to in a previous paragraph of the report. Some copper-grants from South Canara were sent to Mr. Fleet, the Epigraphist, and duly returned to the owner, who wished to get them back, through the Collector of the district.

43. *Bronze Buddhist Figures.*—These figures, which lay for years in the Reading Room, Bezváda, were finally sent to the Museum, but were found to be in such a mutilated state that but very few of them will be fit for exhibition. The bronze of which they are made has been so oxidised by age and exposure, that it is quite brittle and friable.

G.O., Public Department, Mis. No. 1474, of 2nd July 1884.

44. *Stone Figures from Bezváda.*—Two stone figures, belonging to the Hindu Pantheon, were also received from Bezváda, and set up on the steps leading up to the main entrance of the Museum. They possess no special artistic or antiquarian merits, but are valuable as forming items in the general collection of articles illustrative of the mythology of Southern India, which it has been our aim to bring together in the Museum.

45. *Buddhist Sculptures from the Punjab.*—Major Cole, R.E., in a letter to the Private Secretary of His Excellency the Governor, proposed, with the sanction of the Lieutenant-Governor of the Punjab, to transfer from the Lahore, to the Madras, Museum certain Buddhist sculptures, provided the cost of carriage could be met by Madras. The several Railway Companies over whose lines the articles would pass consented to carry them at greatly reduced rates, and the Museum agreed to bear the cost of transit, but the specimens had not been received at the end of the year.

46. *Permanent Photographs of the Amarávati Sculptures.*—Mr. Cousens of the Archæological Survey having photographed all the sculptures sent down to the Museum, Dr. Burgess proposed to have permanent prints made of the negatives, and Government were good enough to consult the Museum as to the number of copies which it would be desirable to procure. It was on this suggested that five sets should be purchased. This proposal was sanctioned, but up to date the prints have not come to hand.

G.O., Public Department, No. 995, of 8th May 1885.

47. *Coins.*—The total acquisitions under this head numbered 2,622, of which 50 were gold, 150 silver, and 2,422 copper.

Gold Coins.—A very valuable addition was picked up by me in the Bangalore bazaar. It is a gold coin with the inscription in old Canarese, and Mr. Rice, C.I.E., who was good enough to examine it, is of opinion that it was struck by a king of the Hoysala Balalas, who reigned in Mysore from A. D. 904 till 1308, when their power was crushed by the tide of Muhammadan invasion from the north. To this dynasty we owe the now ruined temple of Halebid in Western Mysore, which, both as regards its style of architecture and marvellous richness of decoration, is one of the most remarkable relics of sacred buildings in Southern India. Two gold specimens of *Ghunda Bhairunda* coins were acquired. This type is figured by Moore (Hindu Pantheon) under the name of "Kandubarundup," and Wilson, in his "Description of Select Coins" in Volume XVII of the "Asiatic Researches," gives four figures of similar coins, and says they are the "Garuda Mudras," No. 11 of the Mackenzie collection, and ascribed to Vira Raya of Coimbatore. The Ghunda Bhairunda, as represented on the coins, is a two headed bird resembling the Russian emblem, but holding a small elephant in each beak and in each claw. There is now satisfactory evidence to show that this very remarkable type of coin was struck by kings of the Vijayanagar line, who at one time ruled the whole of Southern India, and had their capital at the place known at the present day as Hampi, 34 miles north-west of Bellary on the banks of the Tungabhadra. Amongst the other notable acquisitions in gold were a genuine zodiac coin of Jehangir; three of the medal-like Rama Tankas, one being of very archaic type; nine coins of Mameluke Sultans (part of the great find of buried treasure in Tinnevelly in 1872), and a fine collection of mohurs of Pathan and Moghul emperors of Delhi. For nearly all the last named we were indebted to Mr C. J. Rodgers of Amritsar, a most enthusiastic collector and accomplished oriental scholar. This gentleman has parted with some of the most valuable of his numismatic treasures to the Museum, and has been for years ready to give the institution the first chance of acquiring any remarkable specimens which he could conveniently spare. A few very good coins were got in exchange from Mr. Mitchell of Wynaad, and Mr. W. H. J. Thompson of the Madras Railway gave us, amongst other valuables, several interesting types of pagodas. Eleven coins were also presented by M.R.Ry. P. Etherajulu Naidu.

Silver.—Of silver coins a most valuable selection of Pathan and Moghul types was acquired from Mr. Rodgers, and, to save repetition, it may be mentioned that from the same source we got 277 copper coins belonging to the same dynasties. Through Mr. Watson of Bombay—the well-known Indian art-ware Collector—I secured several of Jehangir's zodiac rupees, as well as the mohur of the same class already mentioned. These coins are now very rare and correspondingly valuable.

Copper.—In addition to Mr. Rodgers' collection already mentioned, we secured through various channels 2,055 South Indian coins. Of these, a portion was of very little interest or value, but in making purchases it is often necessary to take the good with the bad, as otherwise the collectors will not take the trouble necessary to secure and forward specimens.

The order * of the Government of India regarding the purchase and distribution of treasure-trove coins to museums and learned societies ought to be the means of adding to our cabinet, but as yet it has had little or no effect.

48. ARTIST.—The following summary shows the nature and amount of work done by this official during the year :—

	No.
Drawings of Amarávati marbles	175
Figures of plants	20
Other drawings	4
Total ...	199

He thus completed 199 sketches against 130 in the previous year.

49. HERBARIUM-KEEPER.—Mr. T. Abboy Naidu was chiefly occupied in completing the re-arrangement of specimens according to the Flora of British India, mounting and poisoning loose and new acquisitions and giving an eye to the preservation of the entire collection. He also gave valuable assistance in identifying specimens of plants and vegetable substances sent to the Museum for report.

50. TAXIDERMISTS.—The Head Taxidermist, Mr. A. S. Duraisawmy Pillay, has been making great efforts to improve his knowledge of the anatomy and nomenclature of mammals, birds, fishes and reptiles. He has inherited his father's unrivalled art of preserving fishes, and during the year has shown laudable improvement in the mounting of birds. The following abstract shows the new work done during the year, but in addition to this there was the usual amount of attention given to the preservation from decay and the ravages of insects of old specimens in the Museum.

The following is an abstract of the specimens prepared in this department during the year :—

	No.
Mammals	25
Birds	481
Reptiles	73
Fishes	10
Crustacea	44
Mollusca	21
Insects	586
Eggs	47
Skeletons	3
Total ...	1,290

The following list shows the specimens collected by the second Taxidermist in the field :—

	No.
Birds collected	175

51. SCIENTIFIC LIBRARY.—As will be seen from appendices the current numbers of periodi- ls and serials were duly received and the library kept up to the day. The following books e received from the British Museum :—

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* G.O., Public Department, No. 156, of 21st January 1885.

	Vols.
Catalogue of Greek coins, Central Greece, by R. V. Head	1
Do. of Oriental Coins in the British Museum, Vols. 6 to 8 ...	3
Do. of Early English Books to 1640 in the British Museum ...	3
Do. of the Birds in the British Museum, Vol. 9	1
Zoological Collections of H. M. S. "Alert" British Museum, Natural History, 1884	1
Total ...	9

The most important contribution, however, was the "Report on the Scientific results of the *Challenger*" expedition, of which 13 volumes came to hand. The annual reports of the Smithsonian Institution were also useful gifts.

52. *Book-binding.*—A considerable number of the older books suffered so much from damp, defective ventilation and insects in the old library that it has been necessary to rebind them. The binding of serials and periodicals was also punctually kept up. The number of volumes bound during the year amounted to 194, of which 122 belonged to the public and 72 to the scientific library.

53. *Public Library.*—According to the register the number of visitors who came to read or consult books was 5,172, against 5,028 in the previous year. The following list shows the nature and number of the various books called for during the year :—

Class of Books.	*No. consulted.*
Agriculture	6
Anatomy and Physiology	35
Antiquities and Ethnology	42
Astronomy	2
Botany and Economic Botany	48
Classics	3
Electricity	10
English language and literature	187
Fine arts	12
Geography, Travels and Sport	47
Geology and Palæontology	12
History and Biography	102
Law	2
Mathematics	6
Medicine	20
Mental Science	35
Official Manuals and Reports	40
Oriental languages and literature	165
Physical Science	35
Political Economy	5
Religion and Mythology	73
Scientific Periodicals	26
Sociology	2
Works of reference	89
Zoology	25
Miscellaneous	50
Newspapers, &c.	3,804
Total ...	4,883

Additional volumes of Trübner's Oriental series were received, and Patent office publications to the number of 70 came to hand. The special fish library was also considerably increased. Complete lists of additions to both libraries will be found in appendices. The total additions during the year numbered 814 against 1,045 in 1883-84, and were acquired as follows :—

	NO.
Presented by Government	146
Do. by private individuals...	53
Purchased	53
British Museum publications presented	12
Patent office papers	70
Trübner's Oriental series	11
Fish library books purchased	16
Periodicals	453

54. *Visit of the Right Honorable the Governor.*—His Excellency Mr. Grant Duff went systematically through the whole of the natural history collections in the Museum, daily devoting an hour or two to this task in the early morning. While thus engaged the Museum staff

received many valuable suggestions and hints, and were much encouraged by the interest His Excellency manifested in every department of their work.

55. *Establishment.*—The various members of the establishment, especially the Curator, conducted their duties zealously and all gave me much satisfaction. Some members of the staff, notably the Assistant Curator, are poorly paid considering the nature of their work and the responsibility involved, but I shall take the opportunity of offering some suggestions on this point in a separate communication.

MADRAS,
10*th October* 1885.

(Signed) G. BIDIE, Dy. Surgeon-General,
Superintendent, Government Central Museum.

APPENDICES.

A.

GENERAL LIST OF THE CONTRIBUTIONS, &C., RECEIVED FOR THE GOVERNMENT CENTRAL MUSEUM, FROM 1ST APRIL 1884 TO 31ST MARCH 1885.

		NO.
Abboy, T., Naidu, M.R.Ry.—		
Snake		1
Agri-Horticultural Gardens, Superintendent of—		
Fruit of the plant (*Landolphia* species)	1	3
Flowers do. do.	Collection	
Leaves do. do.	do.	
Ambrose, Mr. M.—		
Copper coins		2
Antonio, Mr. C. J.J., Pudupet—		
Copper coins		20
Atkinson, J. E., Esq., Madras—		
Cobra		1
Auseervathum, Mr. T. C., Egmore—		
Copper coin		1
Balavandrum, T. C., Pillay, Vepery—		
Shells		20
Baldrey, Charles J., Esq.—		
Bird (*Cacatua roseicapilla*)		1
Baudry, G. E., Esq., Tellicherry—		
Pumice stone found floating as drift in the sea		1
Bidie, Deputy Surgeon-General G., M.B, C.I.E.—		
Cigars from Burma made of tobacco and chips of *Streblus asper* wrapped in the leaf of a species of *Cordia*		Collection.
Bliss, H. W., Esq., Commissioner of Salt and Abkári Revenue—		
Specimen of gypsum from Kharagara in the Runn of Kutch	1	2
Do. of Bangle salt	1	
Board of Revenue—		
Larvæ of a moth	Collection	11
Locusts from Bellary	do.	
Packets of the fibre of *Sansiviera zeylanica*	9	
Brown, H. W., Esq., Vayitri—		
Eggs of the common land tortoise (*Testudo radiata*)		3
Buchan, St. John, Esq., Bangalore—		
Copper coin		1
Cameron, J., Esq., Bangalore—		
Pods of *Castaneospermum australe*		12
Carmichael, A., Esq., Madras—		
Snake (*Daboia elegans*)		1
Carr, R. P. W., Esq., Kilpauk—		
Black scorpion		1
Carter, H. R. P., Esq., Nungumbaukum—		
Beetle	1	17
Aquatic scorpion	1	
Sphigidæ	5	
Beetles that destroy the cocoanut trees on the Western Coast	8	
Scolopendra	1	
Shed skin of a spider	1	

Chingleput District, Acting Sub-Collector of—		
Specimens of crop-destroying insects found in the Conjeeveram taluk	Collection	3
Specimens of crop-destroying insects found in the Chingleput taluk	do.	
Specimens of crop-destroying insects found in the Madurántakam taluk	do.	
Cockerill, Mrs.—		
"Not-at-home" box being the first made at Madras		1
Coorg, Commissioner of—		
Inkstand used by the late Rajah of Coorg		1
Cox, Colonel, Acting Commissioner of Police—		
Plant (*Tetranthera apetala*)	1	3
„ (*Scoparia dulcis*)	1	
„ (*Schinus terebinthifolius*)	1	
Cox, Mrs.—		
Mygale		1
Daly, William Mahon, Esq., Yercaud, Shevaroys—		
Bird (*Cyornis banyumas*)	1	2
Bird's skin	1	
Damodaram, R., Naidu, M.R.Ry.—		
Rats (young ones)	4	607
Copper coins	2	
Shells (fresh and salt water)	600	
Specimen of zoophyte	1	
Dique, Mr. W. F.—		
Insects		257
Director of Revenue Settlement and Agriculture—		
Crop-destroying insects	Collection	6
Do. do.	do.	
Do. do.	do.	
Larvæ of a moth	do.	
Do.	do.	
Insect destructive to tobacco plants	1	
Ditmas, F. W., Esq.—		
Bison's head on loan (largest known with one exception) ...	1	41
Bat	1	
Lizards	2	
Snakes	36	
Beetle	1	
Duncan, G., Esq., Madras—		
Starfish	1	2
Mantis	1	
Duraisawmy, A. S., Pillay, M.R.Ry.—		
Raw produce		22
Eaton, Mr. J. C., Inspector of Police, Triplicane—		
Copper coins	12	13
Nepa grandis	1	
Etherajulu Naicker, P., M.R.Ry.—		
Rats	3	4
Insect	1	
Etherajulu Naidu Gáru, P., M.R.Ry., Madras—		11
Silver coins		
Etty, Mrs., Madras—		1
Long-tailed spiny mouse (*Platacanthomys lasiurus*)		
Faulkner, Mr. H. A., New Town, Madras—		
Sulphur obtained from the volcano on Barren Island—Andamans	Piece 1	2
Andaman rupee token	1	
Fernandez, V., Esq., Wynaad—		1
Leaf insect of the genus *Phyllium*		
Foote, R. B., Esq., F.G.S., Geological Survey of India—		
Insects	2	38
Geological specimens	35	
Specimen of fungus	1	
Garstin, J. H., Esq., Adyar—		1
Beetle (*Botocera rubus*)		
Goodrich, Hon. H. St. A., Collector of Bellary—		1
Naga-stone		

Governor, the Right Honorable the—		
Fruits of *Vateria Indica* with resin and candles made from the seeds		13
Gurupadham, Mr. Y—		
Moth		1
Hanson, Lieutenant, F. G., Pursewalkum—		
Medal struck in commemoration of the birth of a son and heir to His Highness the Maharajah of Mysore		1
Hawkes, Colonel, H. P., Nungumbaukum—		
Assamese head dress		1
Her Majesty's Secretary of State for India—		
Plants, &c., from Royal Gardens, Kew		1,343
Hillier, Mr. J. H. W., Vepery—		
Thigh bone of a fowl with a united fracture		1
Hogg, Mr. J. R., Pursewalkum—		
Mantis		1
Holmes, W. H., Esq.—		
Nepa grandis		1
Iya Pillay, Eleazer John, Mr.—		
Ferns	16	42
Samples of coffee from Kiliyoor, Shevaroy Hills	12	
Panicum spicatum with a multiple spike	1	
Palmyra seed with a double kernel	1	
Tusser silk handkerchief	1	
Picture of a native building in card board	1	
Musical instrument	1	
Copper coins	9	
Jones, J. A., Esq., Vice-President, Municipal Commission, Madras—		
Saline concretion, shells, wood and bones found in the course of excavations in the People's Park		Lot
Kenny-Herbert, Lieutenant-Colonel, Adayar—		
Snake		1
Kernan, Honorable J., Judge, High Court—		
Insect		1
Kough, C., Esq., Dindigul—		
Nest of tailor bird (*Orthotomus longicauda*)		1
Krishnan, K., M.R.Ry., Cannanore—		
Bags made of the outer bark of *Antiaris toxicaria*		2
Laing, Dr. J. Anderson—		
Scorpion		1
L'Estrange, Colonel—		
Portion of a bracelet made of chank shell found in a cromlech at Hosúr		1
Luke, P. V., Esq., Madras—		
Chrysalis of a butterfly		1
Macleod, B., Esq., Head Assistant Collector, Anantapur—		
Pieces of old pottery found in the ruins of Yellamah temple in Penukonda		13
Madhava Rao, Sir, K.C.S.I.—		
Plant (*Andrographis paniculata*)		1
Muhammad Alí Sáhib Hazari, Deputy Tahsildar, Conjeeveram—		
Copper coins		9
Manuel Vicente Chrysanto Marques, Esq., Madras—		
Copper coins		17
Mathewson, Francis, Esq., Tenampett—		
Insect		1
Mír Siráj-ud-dín Sáhib, Perambúr—		
Leech		1
Mitchell, J. M., Esq., Salt Department, Ennore—		
White-tailed sea eagle	1	4
Hawk's bill turtle	1	
Fish	Collection	
Oysters	do.	
Mitchell, W. C. H., Esq., Hope Ville—		
Bird's eggs	12	13
Black scorpion	1	
Moothawbrum, A. M., Pillay, M.R.Ry.—		
Limestone with pyrites from Cuddapah district		1

Morant, Lieut.-Colonel, R.E.—		
Valacherry limestone		Collection
Morgan, Rhodes, Esq., Malabar—		
Samples of oxydulous iron ore		Collection
Morgan, Walter, Esq.—		
Skull of young monkey		1
Nicholas, E. J., Esq., Seven Wells, Madras—		
Snake (*Eryx johnii*)	1	8
Beetles	7	
O'Donnel, J. M., Esq., Mysore—		
Bison's head		1
O'Farrel, H. H., Esq., Special Assistant to the Collector and Agent to the Governor of Vizagapatam—		
Rock specimens from the vicinity of Narsapatam in the Vizagapatam district		8
Orr and Sons, Messrs. P., Mount Road, Madras—		
Model of the Bellary diamond (Gor-do-Norr)		1
Patton, Master Sam, Pursewalkum—		
Eggs		Collection
President, Municipal Commission, Madras—		
Armadillo	1	5
Cheetah cub	1	
Hedge hog	1	
Kangaroo	1	
Sambur	1	
Price, J. F., Esq., Collector of Chingleput—		
A large stone Jain image from the village of Cooum	1	4
Old silver seals of the Assistant Collector and Magistrate of Chingleput	2	
Larvæ of a moth	Collection	
Prichard, Mr. B. F., Assistant Apothecary, Ongole—		
Scorpion with a double tail		1
Prudhomme, H., Esq., Bank of Madras—		
Indian Boomerang		1
Raikes, H. W., Esq., Shimogah—		
Fruit of *Wrightia tinctoria*		1
Raja Ram, T. Misser, Esq.—		
Copper coins	7	8
Brass do.	1	
Rea, A., Esq., Archæological Survey—		
Stone carving from Hampi		1
Robertson, W. R., Esq., M.R.A.C., Principal, Agricultural College, Saidápet—		
Specimens of wood (*Eucalyptus tereticornis*)		2
Robinson, W. R., Esq., Madras Railway—		
Crocodile's head	1	2
Land shell from Bhaváni	1	
Saldanha, J. P., Esq., Mangalore—		
Insects (*Œdipoda migratoria*), a species of true locusts		Collection
Salem, Acting Head Assistant Collector of—		
Chrysalis of a butterfly (*Euplœa asela*)		1
Sewell, R., Esq.—		
Scoriæ from a curious mound in Kudatani in the Bellary district supposed to be the site of an ancient village		Lot
Shortt, J., M.D., Retired Deputy Surgeon-General—		
Plants	5	155
Mammals	3	
Birds in spirit	18	
Birds' skins	7	
Snakes	17	
Lizards	4	
Fish	1	
Crustacea	28	
Insects	72	
Skill, Rivers W. S., Esq., Vepery—		
Lizard		1
Smith, Mr. W. E., Mount Road, Madras—		
Snake (*Tropidonotus stolatus*)		1

Sneyd, Mr. E. H.—		
Silk cocoons		228
South Arcot, Collector of—		
Larvæ of a moth		Collection
Steavenson, J., Esq., Honorary Secretary, Agri-Horticultural Society, Madras—		
Calabash fruit (*Crescentia alata*)	1	12
Capsules of two species of *Eucalyptus*	6	
Operculæ do.	3	
Insects	2	
Stephens, J. A., Esq.—		
Mantis		1
Stoney, E. W., Esq., Resident Engineer, Arkónam—		
Stone implements		13
Sturmer, Dr. A. J., Egmore—		
Snakes	2	3
Fish parasites	Collection	
Superintendent, Royal Botanic Gardens, Calcutta—		
Plants		24
Theosophical Society, Adyar, Secretary to the—		
Old iron bell with Chinese inscription		1
Thomas, A. W., Esq., Yercaud—		
Young of hill quails		2
Thompson, W. H. G., Esq., Engineer, Madras Railway—		
Hyder Rupee	1	4
Chandragupta Pagoda	1	
Vizyanagar do.	1	
Gundikotta ½ Pagoda	1	
Tod, W., Esq., Mount Road—		
Nepa grandis		1
Tracy, Reverend J. E.—		
Skin of the Malabar squirrel (*Sciurus Malabaricus*)	1	5
Pottery pieces, charcoal pieces, a flint, and an iron knife found together and probably used for striking fire. Taken from cromlechs near Ulachier on the Pennunalulali ghât of the Palnis.	Collection 2	
Beads from the site of an old village near Kanirasapuram on the sea-shore	Collection	
Trimen, Dr., Botanical Gardens, Peradeniya, Ceylon—		
Seeds of *Peltophorus ferruginea*		Collection
Tufnell, Captain, R. H. C., Egmore—		
Copper coins		8
Turner, H. G., Esq., Collector of Vizagapatam—		
Samples of Rhea fibre	2	20
Rhea fibre and its manufactures	16	
Plant (*Clerodendron serratum*)	1	
Plant (*Sida acuta*)	1	
White, D. S., Esq., Egmore—		
Stick insect		1
Collected in and about Madras—		
Birds		175
Purchased—		
Mammals	16	4,322
Birds	89	
Reptiles	23	
Eggs and nests	11	
Fish	35	
Crustacea	31	
Insects	1,588	
Raw produce and manufactures	12	
Gold coins	50	
Silver coins	135	
Copper coins	2,332	
	Total	7,619

B.

Visitors to the Government Central Museum from 1st April 1884 to 31st March 1885.

1884-85.	Signatures made in											
	English.	Telugu.	Hindustani.	Tamil.	Mahratta.	Nagaree.	Guzerattee.	Canarese.	Chinese.	Cingalese.	Malayalam.	Bengalee.
1	2	3	4	5	6	7	8	9	10	11	12	13
April	1,765	498	229	1,643	4	5	39	28	..	..	102	4
May	2,075	590	194	1,744	15	8	24	48	..	..	34	..
June	2,441	476	212	1,764	26	6	16	20	..	..	13	..
July	2,135	552	307	2,008	8	19	46	26	..	..	31	..
August	1,976	454	228	1,641	13	9	23	13	..	..	26	..
September	2,069	405	163	1,560	20	49	17	11	..	..	19	..
October	1,681	353	207	1,397	13	76	35	13	..	..	37	1
November	1,353	218	116	906	8	31	10	22	..	..	41	2
December	2,870	666	177	1,958	13	8	20	13	..	..	16	5
January	3,000	463	167	1,626	21	15	35	11	..	..	20	5
February	1,827	372	147	1,191	10	10	11	10	..	..	22	..
March	1,683	385	179	1,330	14	1	23	7	..	..	48	2
Total ..	24,875	5,432	2,326	18,768	165	237	299	222	..	..	409	19

1884-85.	Total of signatures.	Unable to sign, but tally kept.	Total of visitors.	Number of		Total of visitors.
				Men and boys.	Women and girls.	
	14	15	16	17	18	19
April	4,317	15,324	19,641	11,433	8,208	19,641
May	4,732	15,919	20,651	12,185	8,466	20,651
June	4,974	14,390	19,364	11,735	7,629	19,364
July	5,132	21,500	26,632	15,340	11,292	26,632
August	4,383	16,631	21,014	12,126	8,888	21,014
September	4,313	14,734	19,047	11,361	7,686	19,047
October	3,813	13,053	16,866	10,023	6,843	16,866
November	2,707	4,432	7,139	4,970	2,169	7,139
December	5,746	35,005	40,751	22,727	18,024	40,751
January	5,363	43,537	48,900	21,364	27,536	48,900
February	3,600	11,925	15,525	9,303	6,222	15,525
March	3,672	13,766	17,438	10,506	6,932	17,438
Total ..	52,752	220,216	272,968	153,073	119,895	272,968

C.

Statement showing the number of Visitors to the Government Central Museum for the past five years.

1880-81	173,898
1881-82	211,246
1882-83	271,881
1883-84	242,514
1884-85	272,968

D-1.

List of Books added to the Public Library.

I.—*By Purchase* (*Standard Works*).

	Volumes.
Birch, W., DeGray.—The Commentaries of the Great Afonso Dalboquerque	1
Blackburn, C. E.—Hints on Catalogue Titles and on Index Entries ...	1
Boissier, Edmond.—Flora Orientalis Sive Enumeratio Plantarum in Oriente. Vol. 5	1
Capes, W. W.—The Age of the Antonines	1

	Volumes.
Colchester, Lord.—History of the Indian Administration of Lord Ellenborough	1
Curtis's Botanical Magazine, Nos. 59 to 82 for 1883-84	2
Don, George.—A General System of Gardening and Botany	4
Douglas, J. C. A.—Hand-book of Bee-keeping for India	1
Encyclopædia Britannica, Vol. 17	1
Forrest, G. W.—Official Writings of Mountstuart Elphinstone	1
Gaudry, A.—Les enchainements du Monde Animal dans les Temps Geologiques (Mammiferes Tertiaires).	1
Gaudry, A.—Les enchainements du Monde Animal dans les Temps Geologiques (Fossiles Primaires).	1
Gibbon, E.—The History of the Roman Empire	12
Hawkins, Edward.—The Silver Coins of England	1
India in the Fifteenth Century by R. H. Major, Esq.	1
Kenyons, R. L.—The Gold Coins of England	1
Land and Fresh-water Mollusca of India by H. H. Godwin-Austin, Part 5 for 1884	1
Layard's Birds of South Africa.—Parts 5 and 6	2
Literary remains of the late Professor Theodore Goldstücker	2
Miller, Reverend W.—Ooriya Dictionary with Ooriya Synonyms	1
Murray, J. A.—The Vertebrate Zoology of Sind	1
Napier, Sir W. F. P.—Defects, Civil and Military, of the Indian Government	1
Newbery, R.—Gleanings from Ornamental Art of every style	1
Pollen, J. H.—Ancient and Modern Furniture and Wood-work	1
Rhopalocera Malayana.—A Description of the Butterflies of the Malay Peninsula by W. L. Distant, Part 7 for 1884	1
Steudel's Nomenclator Botanicus	1
Wight, Robert.—Spicilegium Neilgherrense, 2 Vols. in 1	1
Williams, M.—Religious Thought and Life in India	1

D-2.

Periodicals.

American Naturalist, Nos. 6 to 12 for 1884 and No. 1 for 1885	1
Asylum Press Almanac for 1885	1
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Tropical Agriculturist, Vol. 4, Nos. 1 to 8	1

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Periodicals (by Gift).

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Indian Antiquary by J. Burgess, Vol. 13 for 1884.
Journal of the Asiatic Society of Bengal, Part 1, Nos 1 and 2 for 1884; Part 2, Nos. 1 and 2 for 1884; Special No. 1 for 1884.
Journal of the Bombay Branch of the Royal Asiatic Society, Nos. 43 and 44 for 1883-84.
Journal of Indian Art, Nos. 1 to 6.
Memoirs of the Geological Survey of India, Vol. 21, Parts 1 and 2 for 1884.
Memoirs of the Geological Survey of India (Palæontologia Indica), Vol. 1, S 14; Vol. 2, S 10, Part 6; Vol. 3, S 10, Part 1 to 5, S 13·4.
Oesterreichische Monatsschrift fur den Orient, Nos. 1 to 12 for 1884.
Proceedings of the Asiatic Society of Bengal, Nos. 1 to 10 for 1884.
Quarterly Journal of Veterinary Science in India, Nos. 1 to 10 for 1883-84.
Records of the Geological Survey of India, Parts 1 to 4 for 1884.
Statement of Imports and Exports.—January to December 1884 and January to August 1885.
"The Pandit".—A monthly publication devoted to Sanskrit Literature, Nos. 1 to 12 for 1884.

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Reports.

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Periodicals.

Annals and Magazine of Natural History ..	Nos. 73 to 84 for 1884.
Annales de la Societe Entomologique de France...	Nos. 1 to 4 for 1884.
Annales des Science Naturelles, Botanique ...	Vols. 17, 18 and 19 for 1884.
Annales des Science Naturelles, Zoologie ...	Nos. 1 to 4 for 1884.
Bulletin de la Societe Imperiale des Moscow...	Nos. 3 and 4 for 1883.
Conchologische Mittheilungen	Nos. 5 and 6.
Ibis, A—Quarterly Journal of Ornithology ...	Nos. 5 to 8 for 1884.
Journal de Conchyliologie	Nos. 3 and 4 for 1883 and 1 to 3 for 1884.
Journal of the Linnean Society, Botany ...	Nos. 30 to 135 for 1884.
Do do. Zoology ...	Nos. 102 to 106 for 1884.
Nature—A Weekly Illustrated Journal of Science	Vols. 29 and 30, Nos. 746 to 783, for 1883-84.
Nouvelles Archives du Museum d'Histoire Naturelle	No. 2 for 1883, No. 1 for 1884.
Philosophical Magazine	Nos. 103 to 115 for 1884.
Proceedings of the Zoological Society ...	Parts 1 to 4 for 1884.
Quarterly Journal of the Geological Society ...	Nos. 157 to 160 for 1884.
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Transactions of the Linnean Society, Botany...	Vol. 2, Parts 6, 7 and 8, for 1884.
Transactions of the Linnean Society, Zoology.	Vol. 2, Parts 10 to 13, Vol. 3, Parts 1 and 2, for 1883-84.
Transactions of the Palæontographical Society.	Vol. 38 for 1884.

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MADRAS,
10th October 1885.

(Signed) G. BIDIE, Dy. Surgeon-General,
Supt., Government Central Museum.

ORDER—dated 4th December 1885, No. 1342, Revenue.

Miscellaneous.

This very interesting report shows that much valuable work was done in the Museum during the year. The Government note with satisfaction the increase in the number of visitors and their satisfactory behaviour.

2. The thanks of Government are due to the various gentlemen who sent contributions to the Museum.

3. His Excellency the Governor in Council wishes to place on record his very high appreciation of the excellent service rendered by Dr. Bidie in connection with the institution, to the care of which he has devoted great thought and attention for many years.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Superintendent, Government Central Museum.
,, the Public Department.
,, the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Director, Government Cinchona Plantations,
Parks and Gardens, Nílgiris.

Exd. W. H. French.

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No. 137

Communicated to the Officers in charge of Settlement Parties and to the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 18 *January* 1886.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No. III
" " Special Assistant Collector, Nilgiris and Malabar.
" " Inspector of Cattle Diseases.

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G.O., 4th December 1885, No. 1342.

DECEMBER.

Government Central Museum.

Report on the working of the — for 1884-85, reviewed.

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Regd: No: 7

16th December 1885, No. 1378, Revenue.

901

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Season Reports for Week ending 12th December 1885.

Read—the following Telegram from Collector of Ganjam, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 13·35, ragi 27·47, cholum 23·24, cumbu 31·4. No rain; three rain-guages removed; none yet restored. Cholera deaths 45; fever and small-pox slightly exist in Berhampore, Goomsur and Narsannapet taluks; cattle-disease slightly exists in Sómpet and Narsannapet taluks; number of deaths not reported. Irrigated paddy being harvested.

Read—the following Telegram from Collector of Vizagapatam, to Secretary to Government, Revenue Department, dated 15th December 1885:—

Rice 13·41, cholum 23·75, ragi 28·3, cumbu 28·8. Small-pox three taluks; cholera one taluk, 6 deaths; fever five; cattle-disease (diarrhœa) in Anakápalle, Sarvasiddhi, five attacked, all died. In Pálkonda, Párvatipur and in Agency tracts all crops good, elsewhere dry crops fair; but paddy suffering from blight and is estimated to yield 4-anna crop on average; a considerable part of usual paddy land has been left waste or failed totally in these taluks; harvested ragi in Anakápalle, Sálúr, Bobbili, outturn half; cholum in Sálúr, outturn below half; sown black-paddy in Anakápalle and ragi in four taluks; tobacco, chillies, red-potatoes transplanted here and there. Water-supply sufficient. Rainfall below average by 0·9 inches. Godávari, Central Provinces, Jeypore importing paddy and keeping prices in check; no present fear of distress. Rainfall during week, Waltair 0·45, Ellamanchili 0·2; no rain thirteen stations; gauges from Bobbilli, Gajapatinagar, Gúdem, Srungavarapukóta, Kotepad, Malkangiri, Naurangapur withdrawn 1st April; Paderu, Pottungi, 8th April; Gunipur, 17th March.

Read—the following Telegram from Collector of Godávari, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 14·63, cholum 26·25, ragi 30·28, cumbu 30·40. Fever and small-pox slight; cholera 11 deaths six taluks; no cattle-disease. Standing crops generally good; paddy and ragi being harvested, outturn $\frac{3}{4}$; dry crops being sown and tobacco transplanted. Godávari water 7·70 feet above lock-sill. Rainfall—Yernagúdem 0·30; it is above average to date; Alamúr, Kottapeta withdrawn 2nd and 26th April, respectively; not restored.

Read—the following Telegram from Collector of Kistna, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 12·94, cholum 21·32, ragi 26·88, cumbu 23·14. Rainfall—0·15 Répalle, 1·0 Bápatla, 3·0 Guntúr, 0·58 Narsaraopet, 0·01 Krósúr, 1·0 Nandigáma, 1·85 Vinukonda, *nil* elsewhere; rainfall 1st January to date 30·22, against average last three years 39·04. Later dry crops sown; standing crops generally good; wet paddy ripening. Fever exists in many taluks; small-pox and guinea-worm slight; cholera prevailed in Guntúr taluk; unreported last week, attacks none, death 1; this week, 1 and none; cattle, condition good. 3·35 feet water over anicut.

READ—the following Telegram from Collector of Nellore, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Rice 14·29, cholum 24·39, ragi 30·72, cumbu 29·25. Health generally good; small-pox in Nellore, Rápúr; rinderpest, epizootic aphtha in Nellore, attacks 4, deaths 4. Crops standing fair; oil-seeds, cotton, horse-gram harvested, outturn 12 annas each. Agricultural operations—Ragi, iswara-paddy, indigo, horse-gram, cholum being sown. Water-supply sufficient. Rainfall—Nellore 3·75, Gúdúr 2·4, Atmakúr 4·55, Venkatagiri 2·2, Rápúr 1·75, Udayagiri 1·85 ; reports due from eight stations; supplemental report will follow.

READ—also Supplemental Telegram from Collector of Nellore, to Secretary to Government, Revenue Department, dated 16th December 1885 :—

Prices—Rice 14·11, cholum 25·45, ragi 31·97, cumbu 29·22. Health generally good; small-pox in Ongle; fever in Kanigiri; impaction of the omasum, rinderpest in Kandukúr, attacks 5, deaths 3. Crops standing fair; cholum, cumbu harvested in Ongole, outturn 12 annas each. Agricultural operations—Kesari-paddy, ragi being sown in Kandukúr. Water-supply sufficient. Rainfall—Kávali 2·25, Darsi 1·55, Kanigiri 3·4, Kandukúr 0·46, Ongole 0·45.

READ—the following Report from Collector of Cuddapah, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Average of the district—Rice 13·46, cholum 29·32, ragi 33·30, cumbu 30·37. Health good, except in Pullampet, Proddutur, Pulivendla, Kadiri and Madanapalle taluks, where fever reported to prevail slightly; a few cases of small-pox reported from Madanapalle taluk; health of cattle good. Crops good; the following crops harvested, average outturn—paddy $\frac{5}{8}$, ragi $\frac{3}{4}$, cumbu $\frac{5}{8}$, korra $\frac{7}{16}$, arika $\frac{3}{4}$, indigo $\frac{3}{4}$. Agricultural operations—Preparing lands for, and sowing ragi, paddy, horse-gram; harvesting ragi, korra and clearing channels. Water-supply—Tanks in Pullampet taluk have full supply; in other taluks partial supply; in Cuddapah taluk a few tanks have no supply; river, spring-channels and wells contain good supply. Rainfall—Badvél 1·6$\frac{1}{2}$, Sidhout 1·1, Pullampet 1·6$\frac{1}{2}$, Jammalamadugu 0·6, Ráyachóti 0·5$\frac{1}{2}$, Kadiri 0·1, Váyalpád 1·1, Madanapalle 0·4$\frac{3}{4}$, Chitvél 0·9, Kamalápuram 0·3, Pílér 2·3, Proddutur light shower in a few villages; others stations *nil*.

READ—the following Telegram from Collector of Bellary, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Rice 12·82, white-cholum 24·98, yellow-cholum 29·29, ragi 32·44, cumbu 25·88. Rainfall—Bellary 0·02, Ráyadrug 0·47, Hospet 0·40, Kúdligi 0·25, Alúr 0·10, Yemmiganúr 0·70. Health generally good. Sowing bengal-gram, wheat, paddy; early dry crops much improved; later sowings thriving; in parts of Harpanahalli and Hospet, white-cholum crop is attacked with disease; castor-seeds and pulses eaten by caterpillars at Harpanahalli; wet crops good; harvesting paddy, yield average; cholum, ragi, cumbu, korra, gingelly, yield average in parts, below average in others. Prospects continue favorable.

READ—the following Telegram from Collector of Anantapur, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Rice 13·5, cholum 28·84, ragi 33·22, cumbu 25·53. Health generally good; fever in parts of Uravakonda division, and small-pox in two villages Dharmavaram taluk. Pasture procurable. No cattle-disease reported from any taluk. Standing wet and dry crops generally fair; cholum and castor attacked by blight in parts of Tadpatri and Madakasíra taluks; cholum withering in parts of Uravakonda division; paddy, cholum, wheat, ragi, bengal-gram and tobacco being sown in parts of Anantapur, Hindupur, Tadpatri and Madakasíra; ploughing in three taluks; cholum, cumbu, chama, korra, varagu, ragi, castor, gingelly, indigo, gram, paddy and ground-nut being harvested, outturn Anantapur, Gooty between 8 and 12 annas, Dharmavaram, Madakasíra 8 annas, Hindupur between 4 and 12 annas, Tadpatri full. Water-supply fair. Rainfall—Anantapur 0·175, Gooty 0·09, Tadpatri 0·65, Penukonda 0·275, Hindupur 0·75, Madakasíra 0·8, Uravakonda 0·3, Yadakki 0·8; rainfall 2·3 inches above average.

READ—the following Telegram from Collector of Kurnool, to Secretary to Government, Revenue Department, dated 14th December 1885:—

District average—Rice 12·52, cholum 30·13, ragi 31·35, cumbu 30·63. Rainfall—Kurnool 0·05, Pattikonda 0·75, Nandikótkur 0·12, Nandyál 0·08, Sirvel 0·36, Cumbum 2·88, Márkápur 2·25, Atmakúr 0·18, Owk 0·40; no rain in four stations; early cereals and paddy under harvest, yield half to three-fourths; paddy crops under canal suffering from want of water owing to breach of anicut. Small-pox Cumbum taluk; cattle-disease, dysentery in Cumbum taluk, attacks 16, deaths 4; inflammation of the heart in Márkápur taluk, attacks 6, death 1; foot and mouth disease in Nandyál taluk, attacks and deaths not given by Tahsildar; will be reported on receipt of information. Pasture and water sufficient. Prices—Cholum and cumbu falling in Rámallakót taluk and rising in Nandyál and Pattikonda respectively; other articles stationary.

READ—the following Report from Collector of Madras, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice (second sort) 12·08, cholum 16·41, cumbu 17·16, ragi 21·92. Health—Fever prevalent; no cholera; cattle healthy. Imports—Tons, rice 4, other grains 253. Rainfall 1·8.

READ—the following Report from Collector of Chingleput, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 13·87, ragi 26·44, cumbu 18·81, cholum 18·10. Health of people good in four taluks; fever in Ponnéri, attacks 24, no loss; small-pox in Saidápet, death one; cattle good in Conjeeveram, Chingleput and Saidápet; anthrax, rinderpest and dysentery in others, attacks 42, deaths 29. Crops fair; kar is harvested in portions of Conjeeveram and Tiruvallúr, average half. Pasturage good. Agricultural operations—Ploughing for, sowing and transplanting samba, navarai in Tiruvallúr, Saidápet and Chingleput; weeding in Tiruvallúr, Saidápet and Ponnéri. Water-supply sufficient. Rainfall—Sattiavedu 5·30, Ponnéri 4·50, Tiruvallúr 3·45, Poonamallee 2·45, Saidápet 3·30, Homes' Gardens 2·77, Sríperumbudur 2·70, Conjeeveram 1·50, Chingleput 1·25, Madurántakam 2·40, Ootramallur 2·50; all reported. Prospects fair.

READ—the following Report from Collector of North Arcot, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 14·5, cholum 26·7, ragi 29·5, cumbu 25·3. Health—Fever prevails in the Chittoor and Palmanér taluks and Kálahasti, Punganúr and Venkatagirikota divisions, and small-pox in Punganúr division; anthrax, rinderpest and foot-disease among cattle are reported during the week—

Taluks.	Diseases.	Number of Attacks.	Number of Deaths.
Wandiwash	Anthrax and rinderpest ...	Not reported.	40
Arcot	Rinderpest	Do.	Not reported.
Arni	Foot-disease	4	4

The standing crops are reported to be generally in good condition; paddy and ragi were harvested during the week to a limited extent and the outturn was below the average. Agricultural operations are progressing, except in the Kangundi and Punganúr divisions where they are reported to be limited. Water-supply—Tanks generally have from one to six months' supply, except in the Palmanér and Gudiyátam taluks and Kuppam division where the supply is scanty. Rainfall—Arcot 2·10, Arkónam 3·05, Arni 2·00, Chandragiri 2·00, Chittoor 1·57, Gudiyátam 1·97, Kálahasti 3·00, Madarpakam 3·52, Palmanér 1·95, Pólúr 1·10, Punganúr 0·50, Puttúr 1·95, Tirupati 3·00, Tirutani 1·75, Vellore 1·95, Venkatagirikota 0·70, Wálajápet 1·90, Wandiwash 1·15; no rain fell during the week at the remaining one station where rain-gauge is kept; the average rainfall up to date since January 1885 is 30·10 against 39·21 inches, the average of the past four years; more rain is needed.

Read—the following Report from Collector of South Arcot, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 14·56, cholum 25·20, ragi 31·34, cumbu 31·90.

Average Price of Cholum arrived at for past and previous Weeks.

	Past Week.	Previous Week.
Tiruvannámalai	28·56	30·24
Chidambaram	21·84	25·20
Total ...	50·40	55·44
Average ...	25·20	27·72

Generally healthy; guinea-worm prevailed in parts of Tindivanam taluk, and fever and small-pox in parts of Tindivanam and Vriddháchalam taluks; cattle were generally healthy, but they suffered from anthrax (அடைப்பான்) in parts of Tiruvannámalai taluk, and the number of deaths reported during the week was 66 against 67 attacks. The standing crops, viz., ragi, varagu, cholum, millet, ground-nut, horsegram and gingelly in dry lands, as well as sugar-cane, samba and kar-paddy in wet lands, were generally good, but it is reported that ground-nut and varagu are affected in parts of Tindivanam taluk by insects, &c., to some extent, and also paddy crops suffered to some extent from disease called "anaikkombu" (ஆனைக்கொம்பு); ragi and kar-paddy were harvested in parts of Vriddháchalam taluk, and the outturn varied from 8 to 12 annas. Agricultural operations—Ploughing, manuring and weeding operations were in progress in parts of the district; ragi, varagu, gingelly and paddy were sown in parts of the district, and paddy was also transplanted in some places. Water-supply generally good; slight freshes were received in the Gadilam, Pennér, Vellár and Manimuktanadi. Rainfall—Tindivanam 0·45, Merkanam 0·95, Vanur 1·75, Cuddalore 2·03, Chidambaram 2·85, Bhuvanagiri 3·20, Mannárgudi 2·10, Vriddháchalam 2·30, Titagudi 1·00, Tirukoilúr 2·53, Tiruvannámalai 1·30; reports from Gingee, Panruti, Kallakurchi, Ulunderpet and Chengam not received; rainfall at Merkanam, Gingee, Panruti and Ulundurpet for previous week was *nil*; rainfall up to date from 1st January 1885, 40·36; average rainfall in three previous years 41·34; the average is given for all 17 stations at which rain-gauges were retained, while the rainfall up to date in the current year is entered only for nine stations at which the gauges have been retained throughout the year.

Read—the following Telegram from Collector of Tanjore, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 14·18, cholum 25·69, ragi 30·09, cumbu 23·56. Rainfall—Tanjore 1·73, Kumbakónam 1·45, Máyavaram 3·0, Nannilam 1·35, Negapatam 1·40, Shiyáli 3·80, Tiruturaipúndi 1·50, Mannárgudi 1·60, Patukóta 0·85, Vallam 0·70, Tiruvádi 1·45, Tranquebar 1·20, Tiruválúr 0·80, Vedarniem 1·72, Mutupet 0·70, Nídámangalam 1·85, Arantangi 2·30; no rain in Mutupet last week; rainfall up to average. Prospects favorable. Rivers 1 to 7 feet. Crops generally good. Harvest—paddy, varagu, outturn below average. Health of people and cattle generally good; two deaths from cholera; two cattle attacked with anthrax in Nannilam taluk, one died.

Read—the following Report from Collector of Trichinopoly, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Rice (second sort) 13·14, cholum 23·80, ragi 28·84, cumbu 24·71. Health good; cholera Trichinopoly town, 1 attack, no death.

	Small-pox.	
	Attacks.	Deaths.
Perambalúr taluk	7	5
Udayárpálaiyam taluk	58	3
Pudukóta	2	0

Cattle-disease (dysentery) in Udayárpálaiyam taluk, six attacks and one death. Crops good. Agricultural operations—Paddy is being sown; paddy is being transplanted; paddy, ragi, cholum, cumbu and samai are being harvested, outturn paddy 8 to 16 annas, ragi 12 to 16, cholum, cumbu and samai 4 to 12. Water-supply sufficient. Rainfall—Town 1·80, Lálgudi 1·50, Illuppúr 2·65, Musiri 0·75, Kulitalai 0·60, Manapárai 1·15, Perambalúr 0·35, Jayankondacholapuram 1·62, Kílpaluvúr 1·12, Ariyalúr 0·55, Turayúr *nil*; Pudukóta Town 0·64, Alangudi 0·90, Keelanelai 1·03, Tirumiem 1·20, Viralimalai 0·44.

Read—the following Telegram from Collector of Madura, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Rice 13·25, cholum 23·76, ragi 26·44, cumbu 22·6. Rainfall—Madura 1·1, Tirumangalam 1·07, Melúr 3·15, Dindigul 1·2, Periyakulam 0·7, Palni 0·65, Ramnad 0·55, Siyaganga 2·1, Morekulam 1·4, Muturagunáthapatnam 1·25, Tirushuli 1·2, Pámban 1·95, Kodaikanal 2·38, Chinnammanúr 1·37; stations which had not rain, one; stations not reporting, five; previous week no rain at the remaining four stations; rainfall below average. Health of people and cattle generally good; fever prevalent; no cattle-disease. Water-supply sufficient. Pasture fair.

Read—the following Telegram from Collector of Tinnevelly, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Rice 13·3, cholum 20·29, cumbu 18·99, ragi 24·61. Rainfall—Húzur 1·9, Tenkarai 2·4, Tinnevelly 2·17, Ambásamudram 4·05, Nánguneri 3·4, Srívilliputur 0·75, Sankaranainárkoil 2·05, Tenkási 3·9, Otapidáram 1·9, Sátúr 1·0, Tuticorin 1·1. Rainfall since January 23·2 inches against 26·58 average; good freshes down Támbraparni, highest 13 feet deep. Agricultural operations continue. Health good; cattle well. Sami, ragi and gingelly harvested in parts, outturn up to average; standing crops good.

Read—the following Report from Collector of Coimbatore, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Rice 13·25, cholum 20·31, ragi 25·77, cumbu 25·39. Slight fever in Kollegál, Erode, Satyamangalam and Polláchi; slight small-pox in Erode and slight dysentery in Kollegál. Paddy good in eight taluks; want rain in Kollegál and withering in parts of Coimbatore for want of water in the river and channels; cholum under wells good; cholum in punjah good in eight taluks and fair in Coimbatore; cholum in punjah cultivated subsequently damaged by insects in parts of Satyamangalam; ragi under wells good; ragi in punjah good in four taluks; fair and want rain in Coimbatore and Kollegál;

cumbu in punjah good in seven taluks; cumbu in punjah cultivated subsequently damaged by insects in parts of Satyamangalam; harvesting paddy in four taluks, outturn average in Dhárápuram and Polláchi, above average in Udamalpet and below average in Palladam; cholum in punjah in three taluks, outturn average in Karúr and below average in Bhaváni and Dhárápuram; ragi under wells in four taluks, outturn average in Dhárápuram, Palladam and Udamalpet and below average in Bhaváni; ragi in punjah in three taluks, outturn average in Udamalpet, above average in Polláchi and below average in Bhaváni; cumbu in punjah in six taluks, outturn average in Polláchi and Karúr and below average in Erode, Bhaváni, Palladam and Udamalpet. Rain—Coimbatore 1·66, Mettupálaiyam 1·80, Satyamangalam 0·75, Erode 0·75, Perundurai 0·50, Karúr 0·47, Aravakurchi 1·45, Palladam 1·39, Avanáshi 1·60, Dhárápuram 2·93, Kángyam 1·23, Udamalpet 0·49, Polláchi 0·15, Kollegál 0·40, two stations *nil*; there was scanty rain throughout the district on the 7th and 8th which did good. Prospects are still fair and would be much improved by rain.

READ—the following Telegram from Collector of Nílgiris, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 10·13, cholum 17·3, ragi 21·06, cumbu 19·2. Health good. Crops fair, average yield half; lands being tilled. Water sufficient. Rainfall—Ootacamund 1·56, Kótagiri 3·15, Wellington 3·30, Deväla 0·85, Naduvatam 0·30, Pykara 0·55, Coonoor 5·33, Kaiti 3·49, Kódanád 4·85, Gúdalúr and Kundahs not received.

READ—the following Report from Collector of Salem, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 14·18, ragi 29·13, cumbu 25·45, cholum 22·49. Crops in good condition; paddy in one taluk and oil-seeds in two affected by insects and diseases; paddy in five taluks and ragi in six are being harvested, yield below the average. Rainfall not up to average. Agricultural operations—Paddy being sown in parts of five taluks and ragi in one. Health generally good, but fever in parts of Uttankarai and small-pox in Tirupatur; cattle-disease in parts of two taluks:—

Taluks.	Name of Disease.	Number of Attacks.	Number of Deaths.
Atúr	Aphtha epizootica ...	7	...
Uttankarai	Do.	24	...

Water-supply sufficient for agricultural purposes except in three taluks. Rainfall—Salem 0·28, Tiruchengód 0·20, Hosúr 0·20, Dharmapuri 3·30, Tirupatúr 1·17, Uttankarai 1·70, Shevaroy Hills 1·60, Rájapuram 0·65, Paramathi 0·20, Sankaridrug 0·20, Denkanikóta 0·95; Omalúr, Pennagram, Vániyambádi, Harúr reports not received; other stations *nil*.

READ—the following Telegram from Collector of South Canara, to Secretary to Government, Revenue Department, dated 14th December 1885:—

Rice 15·08, ragi 23·47. Slight fever in parts of all taluks except Uppinangadi; measles in Mangalore, Uppinangadi, Udipi and Kasaragód; foot and mouth disease among cattle in parts of Mangalore, Udipi and Coondapoor taluks; number of attacks and deaths in next report. Second rice-crop plants in fair condition. Water-supply sufficient. Rainfall—Mangalore 0·42, Bantvál 0·25, Karkal 0·65, Puttur 0·24, Beltangadi 0·97, Kásaragód 0·05, Hosdrug 0·3; Udipi, Coondapoor *nil*.

16th December 1885, No. 1378, Revenue. 9047

Read—the following Telegram from Collector of Malabar, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Rice 13·21, ragi 23·15. Small-pox slight in four taluks; fever in Wynaad and Wálawanád; cholera in Wálawanád and Ponáni, 55 cases, 35 deaths. Harvesting of later first crop continues in Pálghat, outturn 14 annas; second-crop cultivation in fair condition. Cattle-disease in Wálawanád, nineteen attacks, chiefly aphtha and hoof disease, three deaths. Pasture fair. Rainfall—Tellicherry 0·6, Badagara 0·53, Chevayur 0·37, Calicut 0·2, Vayitri 1·1, Manjeri 0·64, Tirurangádi 0·4, Angádipuram 0·3, Pálghat 0·6, Ponáni 0·15; other stations *nil.*

Read—the following Telegram from Dewan of Travancore, to Secretary to Government, Revenue Department, dated 14th December 1885 :—

Season telegram, Trivandrum. Paddy in good condition. Price—Madras second-sort rice 9·1 and paddy 23·9 seers per rupee. Fever in some places. Yield last cunny crop, Trivandrum division, average. Week's rainfall 1·034.

Order—dated 16th December 1885, No. 1378, Revenue.

Miscellaneous.

Communicated to the Board of Revenue.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Sanitary Commissioner for Madras.
,, the Chief Engineer for Irrigation.
,, the Surgeon-General with the Government of Madras.
,, the Financial Department.

Exd. W. H. French.

100 Copies.

Govt. of (1885) Madra

REVENUE.

No. 135

ommunicated to the Officers in charge of Settlement
s and to the Inspector of Cattle Diseases.

t. of Revenue Settlement
and Agriculture,
ras, 18 January 1886.

(By Order)

First Assistant.

e Deputy Director of Revenue Settlement Party No. III
Special Assistant Collector, Nilgiris and Malabar.
Inspector of Cattle Diseases.

Issued

Recd. *E*

G.O., 16th December 1885, No. 137

DECEMBER.

Season.

Reports on the state of — for week ending 12th December 1885, communicated to the Board of Revenue.

RECEIVED
23 JAN 86

Reg. No. 71

19th December 1885, No. 1391, Revenue.

905

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Proceedings of the Board of Revenue, dated 27th November 1885, No. 3255:—

Read—the following letter from C. BENSON, Esq., M.R.A.C., Assistant Director of Agriculture, Madras, to the Director of Revenue Settlement and Agriculture, dated Dhone, 19th October 1885, No. 880:—

have the honor to submit, for your information and orders, the accompanying received from Mr. Krishnaswamy Mudaliar of Shiyáli, regarding his agricul- operations on his estates near that place.

2. With reference to his remarks in paragraphs 3—5 regarding the annual es of cattle under the Porakudi system, I may mention that Mr. Krishnaswamy daliar informed me that formerly his advances on 500 velis (say 3,333 acres) amounted to Rs. 5,000 per annum for cattle alone. He has now provided, as I reported last year, sufficient shedding as shelter for his cattle, and also made arrangements that they should be properly fed and cared for. The cost of the shedding comes to about Rs. 4 a-head capital charge; which, with 3 annas a-head for repairs, represents a rent charge of less than 8 annas a-head per annum. For 300 velis, he purchased 300 head of cattle at Rs. 35 a-head three years ago, and now has to spend for replacing losses not more than Rs. 1,000 per annum.

3. The annual charges for maintaining the necessary cattle for this 300 velis, on the old and present system, may be represented as follows:—

	Systems, Old.	Systems, Present.
	RS.	RS.
Purchases for replacing losses	3,000	1,000
Rent charge for housing	...	150
Total annual cost ...	3,000	1,150

The saving being in a great measure, I consider, due to the simple expenditure of less than half one year's capital charge for purchases under the old system in the erection of shelter for the working stock. Good feeding and care have of course aided considerably.

4. In the above mentioned and following paragraphs Mr. Krishnaswamy Mudaliar explains his reasons for adopting sugar-cane cultivation, and at paragraph 8 proceeds to relate a most interesting series of experiences regarding the growth of that crop during the last two years. His first tentative experiment in 1882-83 was not very successful, but showed a promise of better results in the future; a promise realised in 1883-84 and, I believe, destined to further fulfilment during the current year. The details given in the report are full and interesting, but most valuable to any one engaged in agriculture in this part of India. The report is in fact one of the best that I have read, and I can make no remarks that would add to its utility, except to say that, in the current year, the crops of cane cover a larger area and were looking remarkably well when I was at Shiyáli in July last.

5. The remarks in paragraphs 6 and 24 regarding the advantages of a diversity of crops are worthy of attention; and that in paragraph 25 shows, as I noted last year, how much more potent is the example of private enterprise amongst agriculturists than that of Government farms.

6. The difficulties noted in paragraphs 26 and 27 are such as seem to call for the action of this department in endeavouring to overcome them. Something has already been done in the direction named, but I think that the interest of the State in the matter is such as to justify our undertaking the expense of providing trained sugar-boilers for a season in and about Shiyáli. As regards the question of the supply of sugar mills, and of course of other costly machines and implements incidentally also, it appears to me that the State might as well make advances, for short terms, on this account as for the purpose of carrying out ordinary land improvements.

7. At paragraphs 30 and 31, Mr. Krishnaswamy Mudaliar passes to another most interesting experiment connected with the working of his estates, viz., the preparatory tillage of his paddy land in a dry state instead of the usual puddle. This system is practised in some parts of the presidency, but usually tillage for paddy on the purely "puddle" system is followed and preferred, without on the face of it anything to recommend it, but much to condemn it. The facts and results of the experiment are set forth by Mr. Krishnaswamy Mudaliar himself, but I am glad to be able to supplement his remarks by further information that I obtained from him when I was at Shiyáli. The following statement shows the cost of cultivating a block of land on the ordinary "puddle" system with improved ploughs in the neighbouring village of Arasur.

Area of block—19 velis, 17 mos, 15 kulis = 132·38 acres :—

Expenses.

	RS.	A.	P.	RS.	A.	P.
Seed	188	10	4			
Ordinary wages of laborers	240	5	4			
Presents and special allowances for laborers	75	0	0			
Wages for watering	21	13	8			
Do. for watching	27	0	0			
Manure	28	5	4			
Sundry charges in cultivation	21	8	0			
Cattle-feeding	46	8	0			
Cake for cattle	126	0	0			
Sundries for cattle	5	0	0			
Repairs of irrigation channels	11	4	0			
Repairs of beds	80	0	0			
				871	6	8
Harvesting	114	13	4			
Carriage of grain and storing	25	0	0			
				139	13	4
Supervision	155	0	0			
Government kist	700	0	0			
				855	0	0
Total expenditure ...				1,866	4	0
Receipts.						
2,517 kalams, 3 markals of paddy, value				2,517	4	0
Net income ...				651	0	0

The gross income was about Rs. 19, and the net income about Rs. 5 per acre against Rs. 17¼ per acre as related in paragraph 31 of Mr. Krishnaswamy Mudaliar's report for the land ploughed dry early in the season. It will be noticed that he states that the average production of Aroor was only Rs. 15 per acre, a return not leaving any balance of profit last year. All the ordinary crops suffered severely last year from the floods, and were also planted late, but the crop on the land first ploughed dry was sufficiently strong and vigorous to withstand the evil effects of the flooding.

8. The small rate of net profit per acre, even under these favorable conditions, is very noticeable.

9. Last year I referred generally to another point regarding paddy cultivation as practised by Mr. Krishnaswamy Mudaliar, and that is the saving in seed effected by taking a little extra trouble in preparing the seed-beds. As it is worthy of further and more definite notice, I may state here that Mr. Krishnaswamy Mudaliar has his seed-beds sub-divided into small plots and carefully levelled, so that the water stands evenly over them and thus all the seeds sown germinate well and produce good seedlings. Ordinarily the seed-beds are large and in some parts higher than others, and thus the seedlings are irregular in distribution and in growth. He finds that he saves from 35 to 50 per cent. in the amount of seed necessary to raise plants for a given area.

10. In paragraphs 32 to 34 of his letter information is given confirming the experience noted in the report I had the pleasure to submit last year regarding the work done by improved country ploughs and also as regards the manufacture of them; and it is interesting to note that some progress is being made in their general introduction. As regards the latter point, the conservation of the Porakudies is not likely to give way, except under pressure such as Mr. Krishnaswamy Mudaliar has brought to bear, and there are few Mirasidars who will go into the practical working of their estates as he has done and devote themselves to their development and improvement so earnestly. The Porakudi system is the least troublesome to manage and is therefore likely to live long.

11. In conclusion, I suggest that this report be immediately printed and distributed as widely as possible, and also that it should be published in the District Gazettes and agricultural sheets.

12. Mr. Krishnaswamy Mudaliar also appears to me to merit all the assistance that it is possible for this department to render him.

13. The report on my visit to Shiyáli has already been submitted.

ENCLOSURE No. 1.

From C. KRISHNASWAMY MUDALIAR, Mirasdar, Shiyáli, to the Agricultural Reporter to Government, Sajdápet, dated 5th October 1885, No. 145.

I have the honor, with reference to our conversation on the subject, to submit a report on some experiments made in the cultivation of sugar-cane in the village of Aroor, situated in the Shiyáli taluk, in the past year.

2. Before going into the details of the experiments, it will be interesting to know briefly the necessity I felt for growing sugar-cane, which has not hitherto been cultivated, and was recently introduced in my estate.

3. All the villages of my estate were cultivated under the Porakudi system; that is, their cultivation was entrusted to a class of people called Porakudies, who furnish the cattle needed for the tillage of the soil, supply the seeds and implements of tillage, and get a proportion of the crop in return for their labor and capital. Whenever Porakudies are unable to furnish the capital required for cultivation, Mirasidars, who are the owners of the estates, make advances to them for purchasing cattle, &c., on condition of deducting these advances from the portion of the produce due to them. The Porakudies of the locality where my estates are situated are generally very poor and lazy, and do their tillage and field operations in a negligent and careless manner. Their working cattle are very wretched and half starved, and most of them die in a month or two after the close of cultivation. In order to replace the cattle that die, the Porakudies usually claim from the Mirasidars large money advances every year, and are mostly in debt to the Mirasidars.

4. The same is the case with the Porakudies employed in my estate. I had to make large advances to them every year for the purchase of cattle. These advances went simply to increase their indebtedness to the estate, with but poor prospect of payment. I have endeavoured, with but little success, to induce them to feed their cattle better, to house them in a more satisfactory way, and to arrange for their better management.

5. While I was trying to find out some remedial measures to remove such a state of things, I obtained different forms of improved ploughs, and experimented largely with them. The result was that I found the plough so advantageously employed in my estate for the last few years the best suited for introduction where wet cultivation is practised. I wanted to bring these ploughs into use on my estate. The first difficulty I met with in this was that the cattle kept by the Porakudies were quite useless for work with these ploughs. I was therefore obliged

to purchase new cattle and to keep them under my own management. I found also the seeds and implements of tillage myself, instead of leaving them to Porakudies as before. The Porakudies were greatly opposed to these measures and were very unwilling that any alteration in the existing system should be effected; on the other hand, it was no gain to the estate in having the lands cultivated by them on the arrangement they had previously followed; nor was it easy to come to a different arrangement with them that was just to both parties. Having determined on a change, I introduced the Pannai system in combination with the Porakudi system in some of the villages where I wished to carry out my reforms. The arrangement with regard to the Pannai system was that the farm laborers were permanently engaged throughout the year and their wages paid by weekly instalments. I have already noticed that the cattle and tillage implements were brought under my direct management, and I must now provide for their maintenance throughout the year.

6. The present system of cultivation, that is cultivating a single crop, requires a large amount of cattle and manual labor during one portion of the year, and for the other their services are not needed. Since I have a permanent establishment for the requirements of the farm, I am obliged to give them work all the year through. This cannot be effected without introducing a change in the existing method, that is, by distributing the work of the farm more thoroughly. Farm work cannot be distributed unless different kinds of crops are grown. Hence the necessity for introducing new crops suitable for the soil, climate, and condition of the locality under reference.

7. It was my desire to select such a crop as would grow well in the season at which paddy cultivation is not going on, and requiring only a small quantity of irrigation water, and which gives the largest outturn for the capital and labor expended on it. I thought that the sugar-cane crop would in a great way fulfil my desires, and that some of my lands were well suited for its culture.

8. Accordingly, in the year 1882-83, I arranged to grow an acre and-a-half of sugar-cane. The land was ploughed to a depth of five inches, harrowed and ridged. The following manures were applied to it:—*first*, 56 cart-loads of farm-yard manure; *second*, folding of 1,400 sheep; *third*, a small quantity of ground-nut cake, and *fourth*, indigo vat refuse. Three sorts of seed-canes were obtained, of which two, *nanal* and *rastali*, are local varieties. Nanal is a thinner and inferior variety to rastali, which is a thick and hard cane. The other sort was obtained from Bangalore. These were red canes, soft and tall, and far superior to both of those above mentioned. All were planted in the end of June and in the beginning of July. They were four times irrigated, and weeded five times. The crops did not grow uniformly. Those on a higher level were much better than those standing on a low level, where water could not be well drained. This suggested to me that drainage is very important for cane cultivation. Since the lands surrounding the cane crops were under paddy, and there was water standing in them always, it was found impossible to drain the cane land thoroughly. It was also thought that the seeds should be planted much earlier.

9. Having learnt that the country wooden mill is expensive and inefficient for crushing canes, I purchased a three-roller Beheea sugar-cane mill of Messrs. Thomson and Mylne for Rs. 185. Crushing began in the beginning of February. Neither I nor my men had any knowledge of cane-crushing, and we were quite new even to fitting the machine to work. I was obliged to go on only with the aid of the instructions given in a paper concerning the working of the mill. The men engaged in it did not understand the nature of the work; they had not sufficient time to obtain proper experience. The area cultivated was very small, and a portion of the crop had to be reserved as seed for the next year. The juice was boiled in mud-pots, according to country method, and converted into jaggery. The product was not good; it was of a black color and mixed with dirt, &c.

10. The following account shows the income and expenditure of the experiment:—

	RS.	A.	P.
Ploughing	3	5	0
Harrowing	2	14	9
Removing paddy stubble ...	1	15	0
Making ridges	2	13	0
Seed canes	13	2	0
Cutting canes and conveying them to the field	6	0	3
Planting	2	13	0
Manure and manuring ...	21	4	11
Four waterings	7	2	0
Five weedings	15	15	3
Fencing	10	7	9
Opening drains	0	8	6
Total ...	88	5	5

	RS.	A.	P.
Building furnace	4	12	0
Stripping and conveying canes to the milling place	6	14	4
Crushing canes	8	10	10
Boiling cane-juice and making it into jaggery	11	13	8
Sundries	2	14	0
Hire of mill	15	0	0
Total ...	50	0	10

ABSTRACT.

	RS	A.	P.
Cost of cultivation	88	5	5
Cost of manufacture	50	0	10
Supervision	24	0	0
Government kist	15	0	0
Interest	10	0	0
Total ...	187	14	3
Value of jaggery obtained, 4⅞ candies	122	5	0

A portion of canes, worth Rs. 112, was reserved for seed. Though there was some profit, and that a little above the average gained in paddy cultivation, I was not satisfied with the experiment; the reason being that it was the first year.

11. Having gained some experience, I arranged to grow a greater extent (6 acres) with sugar-cane last year. I selected this time a piece of land more favorable for drainage and irrigation than the last time. The soil was of the nature of a clay loam resting on a naturally well drained sub-soil of sand or sandy loam, and was very fertile. This land was under paddy crops (car variety) the year before. It was efficiently ploughed by improved ploughs to a depth of 5 to 6 inches and harrowed; 175 cart-loads of farm-yard manure were applied to it. Ridges were formed and drains opened at suitable distances.

The three varieties of canes noticed above were planted on the sides of the ridges at intervals of ¾, 1 and 1⅓ ft., respectively. The planting was completed by the middle of May, two months earlier than in the previous year. It generally takes a month for the sprouting of all the seeds; 60 per cent. germinated. The crop was four times irrigated by means of picottah from a channel and springs dug out for the purpose, and weeded five times. No manure was applied to it after planting. The crop grew very luxuriantly. The season was found very favorable for the growth of cane crops. There was no rain at the time of planting and for a few months afterwards. From May to September, or during five months after the planting, the rainfall was only 5 inches, which was all that could be desired. Freshes did not come down in the adjacent channels as early as usual. The crop therefore had every advantage that could be derived from efficient drainage. It looked very promising, and I found that each plant had side-suckers from 8 to 12 in number on the average. During five months the plants grew to a height of from 5 to 6 feet. The heavy and incessant rains of November and December last did not do much damage to the crop, as it had attained sufficient height and strength.

12. In the month of February, I arranged to begin crushing. Only the red canes were not crushed, as very few seed-canes were obtained from Bangalore, and their growth during the two years was not good; but some of them appeared a little bigger and taller than the original cane obtained from Bangalore. I reserved all of them with a view to secure more seed for extending their cultivation.

13. The other two sorts, nanal and rastali, were crushed. The mill used in crushing them was the three-roller iron mill of Thomson and Mylne. I purchased this year a boiling pan, made of wrought-iron in rectangular form, from a firm at Madras for Rs. 70. The mill is worked at the same time as the boiling proceeds, so that juice will be ready for the second boiling as soon as the first is completed. After the juice has been evaporated to the desired consistency, it is poured into a shallow pan and left to harden. Afterwards it is made into round cakes and stored for sale.

14. Three boilings were effected in a day. It takes 5 hours for the first boiling, and for the next two, only 4 hours each.

15. Two pairs of cattle and three men are required for working the mill, and the same number of men for boiling purposes, thus:—

One for driving.	One employed at the furnace.
One to supply canes.	One to supply cane refuse for fuel.
One for taking out the juice and removing cane refuse.	One for making jaggery.

16. The percentage of juice and of jaggery to cane crushed was calculated as follows:—

Rastali Cane.	First Time. LB.	Second Time. LB.
The weight of cane crushed	1,125	30
Do. of juice obtained	540	15⅝
Do. of jaggery obtained	98⅓	3⅛
Juice per 100 lb. of cane	48	52
Jaggery do.	8¾	10 5/12

The average proportion of juice to cane is 50 per cent., and that of jaggery to cane is $9\frac{1}{2}$ per cent.

17. The juice obtained in crushing $3\frac{9}{16}$ acres amounted to $4{,}115\frac{3}{4}$ pots of $15\frac{5}{8}$ lb. each, or 64,308 lb. This represents an average production of $16\frac{1}{10}$ tons of stripped cane per acre, at 50 lb. juice to every 100 lb. canes crushed.

18. The mill was worked for 11 hours each day, from 6 A.M. to 5 P.M. It took 60 days to crush $4\frac{5}{8}$ acres. Therefore, the time required for crushing one acre is 13 days.

19. The extent under the *rastali* variety was $3\frac{9}{16}$ acres, and the outturn of jaggery obtained was 12,279 lb., or $5\frac{1}{2}$ tons. The average outturn per acre of jaggery = $1\frac{1}{2}$ tons, or $6\frac{3}{4}$ candies, from an acreage production averaging $16\frac{1}{10}$ tons of stripped cane.

20. 1·06 acres were planted with the *nanal* variety. The produce was 2,503 lb. of jaggery, or $4\frac{11}{16}$ candies was the average outturn per acre. The jaggery produced from an acre of cane crop under the rastali variety was shown to be $6\frac{3}{4}$ candies, or $2\frac{1}{16}$ candies is the gain from *rastali* over *nanal*. I see no difference in the expenditure in cultivating the two varieties of canes. The *rastali* is, however, far inferior to the red cane of Coimbatore and Bangalore, or the white cane of Bellary. It is therefore quite clear that to get a good profit the selection of better sorts of canes for seed is one of the important matters to which the attention of cane-growers should be drawn.

21. The time most favorable for the crushing of *rastali* canes was found by the following experiment :—

The time of planting was the month of May.

The Time of crushing.	Weight of Cane crushed.	Weight of Jaggery.	Percentage of Jaggery to Cane.
	LB.	LB.	
March	45,992	4,406	9·58
April	60,172	5,930	9·85
May	22,453	1,943	8·65

It was stated before that the average percentage of jaggery to cane was $9\frac{1}{2}$. Now, the produce obtained in the months of March and April was a little above the average. It will therefore be seen that the crushing should begin ten months after the time of planting and be completed with the twelfth month. The ryots in my neighbourhood plant this cane in the month of July, and crush them by the month of January; that is, seven months after the time of planting. I think there must be great loss to them by crushing canes so soon.

22. I give below the income and expenditure of growing an acre of cane :—

The Cultivation Expenses of 6 Acres.

	RS.	A.	P.
Ploughing	50	1	1
Harrowing	20	0	8
Ridging	12	9	3
Manuring, 175 cart-loads farm-yard manure	8	12	6
Seed canes	112	0	0
Cutting seeds, conveying and planting	28	4	9
Four waterings	38	13	4
Six weedings	38	11	6
Fencing	16	15	3
Total ...	326	4	4
The expenditure on 1 acre ...	54	6	0

Crushing Expenses of $4\frac{5}{8}$ Acres.

	RS.	A.	P.
Building furnace	5	15	8
Cutting and conveying canes to milling place	15	15	8
Stripping	40	1	4
Driving, supplying cane, and removing cane refuse ...	33	2	11
Charge for bullocks	17	1	11
Boiling	74	1	8
Lime and oil	4	6	7
Sundries	7	12	8
Total ...	198	10	5
Expense on 1 acre	42	15	3
Hire of mill for 13 days ...	13	0	0
Manufacturing expenses per acre...	55	15	3

Abstract of Expenditure and Income per Acre of Cane.

	RS.	A.	P.		RS.	A.	P.
Cost of cultivation	54	6	0	6¾ candies jaggery at Rs. 25 per candy	168	12	0
Cost of manufacture	55	15	3				
Supervision	10	0	0				
Government kist	9	0	0				
Interest on capital at ½ per cent.	7	0	0				
Total ...	136	5	3	Profit	31	11	0

Good jaggery is now sold at the rate of from 20 to 25 rupees a candy in the local market.

23. I sold a portion of the crop as seed-cane at half a rupee a bundle containing 100 canes. This was very profitable. I obtained from one acre Rs. 350. There was not only a saving of the expense of crushing, but the price of canes is also double the price of jaggery; but it will be impossible to find a market for canes on any large scale without manufacturing into jaggery.

24. I have lands to the extent of 120 acres in the same village where I cultivated the cane crop. Those lands were under paddy cultivation. Owing to the lateness of freshes and to the damage caused by excessive rain afterwards, the crops became very poor; and I was not able to obtain as much profit from the whole village as from 6 acres of cane crop. I, therefore, think that it will be more desirable for a land-holder to cultivate two or more crops than to confine the cultivation to one crop only, as at present.

25. The success which attended my crop did not fail to produce the desired effect in the minds of the neighbouring mirasidars. Formerly, cane was grown by very few persons in only one village of the taluk; but during the present year its cultivation was extended to more villages, and I have been gratified to learn that land-holders have grown canes on estates situated in twelve villages. I have also planted 15 acres of cane this year in the village of Aroor.

26. The difficulty of enlarging the area under sugar-cane lies not in the cultivation of the crop, but chiefly in the manufacture. We should have trained men before we hope to bring improved implements into use; and unless attention is directed towards the improvement in the training of the former, there is no hope of improvement in introducing the latter. I began crushing in the month of February, and finished by the middle of May. The work was protracted over nearly four months, but the actual working time was only sixty days. It was delayed so long simply because the men employed in the work were not trained. They broke the machine very often, and I was obliged to engage the services of a smith and a carpenter throughout the time and to spend a fourth of its cost in repairing it. Not a day passed in which I did not expect some damage to the machine, or stoppage in the work. The jaggery produced was not good. Not only this, it would not retain a solid condition desired till the last. Much difficulty was experienced in disposing of it. Seeing there is no other alternative but to get a trained man from abroad, I have determined to obtain one, if possible, from Beheea during the current year, to show my men and my neighbours how the machine is worked and the juice converted into jaggery.

27. There is also the following difficulty. Manufacturing firms sell these machines at very high prices—prices always beyond the resources of ordinary ryots. If they were made and sold on terms suitable to the condition of the country and of its cultivators, it would be advantageous for both the buyer and the seller. Costly machines can be easily purchased by means of co-operation among the mirasidars. But co-operation is an action in which the land-holders of my neighbourhood are lamentably wanting. I was, however, able to pursuade one of the ryots to purchase an iron mill, and I procured one this year in his behalf.

28. It will be more interesting if the working of the iron mill and pan be compared to that of the native wooden mill and mud-pan. My repeated attempts to get a mill from my neighbours or to obtain correct accounts having proved fruitless, I intend to construct one of my own for next year and hope to compare the working of both.

29. I am unable, in the face of so many difficulties and with such limited experience, to assert the foregoing observations as conclusive, and must have some years' experience before giving any decided expression of opinion on the subject.

30. Last year I noticed that a few acres of ordinary paddy-land had been brought under dry cultivation. I now give the result. As soon as the crop was harvested, the land was ploughed during January and February in the dry state. Three ploughings were effected by improved ploughs and the land left for aëration. When the freshes came down the channels,

water was let into the field and allowed to remain for 40 days. The land was reploughed once afterwards and paddy transplanted. The crops grew luxuriantly and the outturn was excellent.

31. The income and expenditure of 6⅔ acres of land ploughed dry after harvest is shown below:—

Expenditure.

	RS.	A.	P.
Three dry ploughings	21	11	8
One wet ploughing	1	15	8
Digging head-lands and levelling	1	10	7
Preparation of seed beds and sowing	3	10	2
Seeds	9	13	6
Pulling plants	4	3	0
Conveying to and spreading in the field	2	9	1
Transplanting	3	13	8
Sixty-eight cart-loads of manure	2	10	5
Weeding	4	7	6
Watering	2	0	0
	58	9	3
Reaping	7	5	0
Conveying to the threshing place .	4	0	0
Separation of grain from straws by men and by treading of bullocks.	5	11	0
Preparing grain to market ...	1	6	0
	18	6	0
Total ...	76	15	3
Supervision	10	0	0
Government kist	40	0	0
Interest on capital	8	0	0
Total ...	134	15	3
Wear and tear of cattle and implements	5	12	0
Total ...	140	11	3

Income.

	RS.	A.	P.
237 Kalams of paddy at Re. 1...	237	0	0
300 Bundles of straw ...	18	12	0
Total ...	255	12	0

Rs. 256 — Rs. 141 = Rs. 115, or Rs. 17¼ is the profit on one acre, while the average production itself of the village from an acre of land was only Rs. 15. Breaking up of paddy-land after harvest is no doubt advantageous, but there is some difficulty for bringing it into practice; if the land is required to be ploughed dry, it must be ploughed efficiently, that is, no interspaces should be left between the furrows; if these be left, the crops do not grow well. Moreover, dry ploughing needs to be performed when there is full work in harvesting the crop; under the present system it is not possible to induce the laborers to engage in ploughing while harvest is in progress. However, a portion of the farm can be ploughed with advantage at and after the time of harvest.

32. The statement I made in my last report with regard to the working capabilities of my ploughs is further confirmed by the following account:—

Abstract of the Progress Report of the Cultivation Account of the Estate.

Description of Ploughs in use during the year.	Number of each.	Extent allotted. Velis or Acres.		Acres cultivated per Plough.
Improved ploughs	109	224	1,493	13¾
Country do.	290	225	1,500	5⅙

Extent cultivated.

Until.	By improved ploughs.		By country ploughs.		PER CENT OF ALLOTTED AREA.	
					Improved ploughs.	Country ploughs.
	VELIS.		VELIS.			
22nd July	12	0	6	3	5·30	2·71
31st "	29	9	22	9	13·0	9·89
7th August	40	1	32	9	17·74	14·30
15th "	48	7	41	13	21·43	18·44
22nd "	76	3	63	9	33·70	28·16
31st "	106	8	93	14	47·08	41·58
7th September	125	12	118	10	54·64	52·56
15th "	156	4	143	11	69·0	63·70
22nd "	170	11	163	15	75·39	72·66

The work of the improved ploughs was proportionate to the work of the country ploughs. It was not less in any one week. I expect that it will continue in the same way throughout the season.

33. The workshop instituted in my estate proved more useful than the last year. Some forty ploughs were constructed during the year and many more were repaired in it.

34. Sample ploughs were sent to Bellary, Adóni, Nagpore, Bangalore and Vriddháchalam. Sixteen ploughs were sold within the district and others employed for the use of the estate.

35. I procured this year a carpenter, experienced in the construction of carts, from Pondicherry. A dozen carts are in course of construction, and will be completed in a month. People here usually get carts from Pondicherry. If the cart turned out in my workshop proves stronger and cheaper than those of Pondicherry, it will be advantageous to myself and for the people.

(True Copy.)

(Signed) C. BENSON, M.R.A.C.,
Asst. Director of Agriculture.

DHONE,
19th October 1885.

Endorsement by the Acting Director of Revenue Settlement and Agriculture, dated Madras, 12th November 1885, No. 2184.

Submitted for the information of the Board of Revenue and Government.

2. The report furnished by Mr. Krishnaswami Mudaliar on the results of his laudable efforts to grow sugar-cane is most valuable and interesting. The Assistant Director's recommendation that the report be published in the District Gazettes and otherwise widely circulated has the Acting Director's support.

3. Every legitimate and judicious assistance has been well earned by Mr. Krishnaswami Mudaliar. But the proposal of the Assistant Director that Government should furnish Mr. Krishnaswami Mudaliar with the services of trained sugar-boilers does not commend itself to the undersigned. Messrs. Thomson and Mylne, of Beheea, sent out some of their men to the Bellary district in the beginning of the current year to instruct the ryots in the use of their improved mills and evaporators, and will no doubt depute some men to the southern districts also if they are satisfied with the prospect of doing business thereabouts. Moreover, it is understood that a gentleman on the Engineer establishment of the South Indian Railway, who is interested in furthering the sales of the improved mill, intends to train men in one of the southern districts in the use of the mill. Mr. Krishnaswami Mudaliar himself thinks of obtaining a trained workman from Beheea—(Paragraph 26 of his report).

4. Mr. Benson also recommends that Government should make money advances to ryots towards purchase of agricultural machines and implements. As such advances would not come within the scope of the Land Improvement Loans Act, it is apprehended that there would be difficulty in recovering them. When the Agriculturist's

Loans Act, 1884, and the rules proposed thereunder in G.O., dated 13th May last, No. 565, shall have been brought into operation in this presidency, it will be possible to give effect to Mr. Benson's recommendation.

(Signed) W. H. GLENNY,
Ag. Dir. of Rev. Settl. and Agri.

Resolution—dated 27th November 1885, No. 3255.

Submitted to Government.

2. Mr. Krishnaswami Mudaliar deserves great credit for the persistent energy and enterprise displayed by him in the improvement of his estate. But he was very much in error when he decided to undertake the cultivation of the sugar-cane as a crop that "would grow well when paddy cultivation is not going on, and which requires only a small amount of water for cultivation." On the contrary, the sugar-cane is a twelve-months crop and requires a constant supply of water throughout the year, though not in great quantity at any one time. In Tanjore, the irrigation is chiefly from channels which convey water only during certain months and leave the land dry for the rest of the year. It is also of great importance that the land for sugar-cane should be well drained as well as well manured, and the water-supply under complete control, conditions which do not generally obtain in Tanjore. As to implements, the Board observe that the experience of the ryots of Coimbatore has long ago led them to abandon iron in favor of copper evaporators.

3. The Board agree with the Director that it would not be advisable for Government to provide trained sugar-boilers for the instruction of the ryot. The papers may, however, be communicated to Messrs. Thomson and Mylne, who will doubtless be willing to afford every assistance in their power.

(True Copies and Extract.)

(Signed) E. S. LAFFAN,
Acting Sub-Secretary.

To the Secretary to Government, Revenue Department.
Copy to the Director of Revenue Settlement and Agriculture.

ORDER—dated 19th December 1885, No. 1391, Revenue.

Miscellaneous.

Recorded. The Government have much pleasure in again noting their marked approval of the enterprise shown by Mr. C. Krishnaswami Mudaliar. The very interesting report furnished by him will be at once translated and published in the Fort St. George and Agricultural sheets of District Gazettes. The Director of Revenue Settlement and Agriculture, and Collectors are requested to take care that the widest circulation is given to the paper.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Public Department.
,, the Superintendent, Government Press.

Exd. L. D'Netto.

100 Copies.

Govt. of (1885) Madra

REVENUE.

Issued

Recd.

Encl.

G.O., 19th December 1885, No. 139

DECEMBER.

Agricultural operations on Mr. Krishnaswami Mudaliar's estates in Tanjore.

Report regarding —, recorded, with an expression of the marked approval of Government of the enterprise, and the paper ordered to be translated and published in the Fort St. George and District Gazettes.

No. 139

ommunicated to the Officers in charge of Settlement s and to the Inspector of Cattle Diseases.

t. of Revenue Settlement
and Agriculture,
ras, 18 January 1886.

(By Order)

First Assistant.

e Deputy Director of Revenue Settlement Party No. 14
Special Assistant Collector, Nilgiris and Malabar.
Inspector of Cattle Diseases.

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RECEIVED
23 JAN 86

23rd December 1885, No. 1397, Revenue.

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GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Season Reports for the Week ending 19th December 1885.

Read—the following Telegram from Collector of Ganjam, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

Rice 13·41, ragi 20·42, cholum 23·24, cumbu 31·5. Rainfall—Berhampore 0·8, Aska 1·35, Russellkonda 0·24, Suradá 0·75, Sómpet 1·19 ; no report Gopálpur ; three fresh rain-gauges received, despatched and will be immediately restored. Small-pox in Berhampore taluk ; cholera deaths 25 ; cattle-disease Berhampore, not identified ; Ganjam rinderpest ; Aska cow-pox ; Sómpet dysentery ; so far as information available, attacks 60, deaths 44. Estimate of actual outturn not yet available ; harvest of paddy being in progress ; fairly accurate estimate 8-anna crop.

Read—the following Telegram from Collector of Vizagapatam, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

Rice 13·59, cholum 24·16, ragi 28·87, cumbu 29·4. Small-pox two taluks ; cholera three taluks, 25 deaths ; fever five ; no cattle-disease in Pálkonda, Párvatipur and Agency tracts. All crops good, elsewhere dry crops fair but paddy suffering from blight ; harvested paddy here and there in six taluks, outturn estimate in Párvatipur 10 annas, Pálkonda 12, Vizianagrum 5, Anakápalle, Viravilli 4 each, Gajapatinagar 2 ; ragi harvested two taluks, outturn half ; ragi sown in Gajapatinagar ; chillies, red-potatoes, ragi transplanted one taluk ; ragi alone transplanted three taluks. Water-supply sufficient. Rainfall below average by six-tenths ; no distress apprehended ; Anakápalle 0·1, Bimlipatam 1·3, Yellamanchilli 0·75, Kuppili 2·0, Narsapatnam 2·0, Vizianagrum 1·0, Waltair 1·45 ; no rain eight stations ; gauges from Bobbili, Gajapatinagar, Gúdem, Srungavarapukóta, Kotipad, Malkangiri, Naurangapur withdrawn 1st April ; Paderu, Pottungi, 8th April ; Gunipur, 17th March.

Read—the following Telegram from Collector of Godávari, to Secretary to Government, Revenue Department, dated 22nd December 1885 :—

Rice 14·42, cholum 24·85, ragi 30·0, cumbu 29·0. Fever and small-pox slight ; cholera 54 deaths six taluks ; no cattle-disease. Standing crops generally good ; paddy being harvested, outturn $\frac{3}{4}$; dry crops being sown. Godávari water 7·90 feet above lock-sill. Rainfall—Amalápuram 2·0, Viravasaram 1·70, Cocanada 0·75, Peddápuram 0·50, Rajahmundry 3·60 ; rainfall to date is above average ; Alamúr, Kottapeta restored.

Read—the following Telegram from Collector of Kistna, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

Rice 12·94, cholum 21·32, ragi 26·88, cumbu 23·14. Rainfall—2·6 Répalle, 0·45 Bápatla, 0·25 Guntúr, 1·85 Gudivada, 3·4 Bandar, 0·1 Nandigáma, 2·85 Bezváda, 0·35 Gannavaram, *nil* elsewhere ; rainfall 1st January to date 31·13, against average last three years 39·06. Later dry crops sown ; standing crops generally fair ; wet paddy ripening. Fever exists in many taluks ; small-pox and guinea-worm slight ; cholera subsided ; cattle, condition good. 2·9 feet water over anicut.

Read—the following Telegram from Collector of Nellore, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

Rice 14·2, cholum 24·87, ragi 31·06, cumbu 28·95. Health generally good ; small-pox in Nellore, fever in Udayagiri, epizootic aptha in Gúdúr, attacks 40, deaths 20. Crops standing fair ; ariga harvested in Kávali, outturn 10 annas.

Agricultural operations—Ragi, cholum, indigo being sown in some places. Water-supply sufficient. Rainfall—Nellore 5·25, Gúdúr 3·5, Atmakúr 4·15, Kávali 7·25, Venkatagiri 7·6, Udayagiri 6·9; reports not received from other taluks.

Read—also supplemental Telegram from the Collector of Nellore, to the Secretary to Government, Revenue Department, dated 23rd December 1885:—

Rice 14·06, cholum 25·21, ragi 31·46, cumbu 28·65. Health generally good; small-pox in Ongole; rinderpest, epizootic aptha in Rápúr, Kandukúr, attacks 10, deaths 5. Crops standing fair; ariga harvested in Ongole, outturn 12 annas. Agricultural operations—Paddy, ragi, cholum, cumbu, indigo being sown in some places. Water-supply sufficient. Rainfall—Rápúr 7·6, Ongole 3·0, Kandukúr 3·85, Darsi 0·8, Kistnapatam 7·15, Tada 3·1, Ramapatam 3·8, Kanigiri 3·7.

Read—the following Report from Collector of Cuddapah, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Average of the district—Rice 13·20, cholum 29·28, ragi 33·26, cumbu 30·15. Health good, except in Pullampet, Proddutur, Kadiri and Váyalpád taluks, where in some places fever reported to prevail slightly; a few cases of small-pox reported from Madanapalle taluk; in one village of Sidhout taluk four cattle attacked with jabbavapu (swelling of the thigh), of which three died; in other taluks good. Standing crops good; the following crops harvested, average outturn reported to be—ragi $\frac{3}{4}$, paddy $\frac{3}{4}$, cholum $\frac{9}{16}$, indigo $\frac{5}{8}$, arika $\frac{5}{8}$, and korra $\frac{5}{8}$. Agricultural operations—Clearing channels; irrigating crops from wells; preparing lands for sowing indigo, ragi, paddy, cholum and bengal-gram and harvesting paddy. Water-supply—In Pullampet taluk tanks have full supply; in other taluks partial supply; a few tanks in Cuddapah taluk contain small supply; there were good freshes in the Cheyér, Pullanger, Gunjana and Pennér rivers and heavy freshes in the Sagilér river; river and spring-channels and wells contain good supply. Rainfall—Badvél 5·30, Proddutur 2·70, Sidhout 3·30, Pullampet 6·85, Cuddapah 4·80, Jammalamadugu 1·30, Ráyachóti 2·35, Váyalpád 1·30, Madanapalle 1·55, Chitvel 7·20, Kamalápuram 2·40, Pílér 4·30, Pulivendla report not received, Kadiri *nil*.

Read—the following Telegram from Collector of Bellary, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 12·96, white-cholum 25·55, yellow-cholum 29·36, ragi 32·79, cumbu 26·51. Rainfall—Bellary 0·37, Hospet 0·70, Kúdligi 0·20, Hadgalli 0·45, Harpanahalli 0·25, Alúr 0·17, Adóni 0·22, Yemmiganúr 0·90, Siruguppa 0·70. Health generally good; fever in parts of Kúdligi and in kasba Alúr. Sowing paddy; early dry crops much improved; in parts of Harpanahalli white-cholum crop is attacked with disease; pulses eaten by caterpillars at Kúdligi; wet crops good; harvesting paddy, yield average in parts and below average in others; cholum, ragi, cumbu, korra, gingelly, yield average in parts, and above average in others.

Read—the following Telegram from Collector of Anantapur, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 13·5, cholum 28·81, ragi 32·5, cumbu 26·33. Health generally good; fever in some villages of Gooty taluk, and small-pox in three villages Dharmavaram taluk. Pasture procurable. No cattle-disease reported from any taluk. Standing wet and dry crops generally fair; cholum and castor attacked by blight in parts of Tadpatri and Madakasíra taluks; cholum withering in some villages of Gooty taluk; paddy, cholum, wheat, bengal-gram and tobacco sown in parts of Anantapur, Tadpatri, Hindupur and Madakasíra; ploughing in five taluks; castor, gingelly, green-gram, korra, paddy being harvested; outturn Gooty between eight and twelve annas, Hindupur between four and twelve annas, and Dharmavaram eight annas. Water-supply fair. Rainfall—Anantapur 0·7, Gooty 2·14, Tadpatri 0·5, Penukonda 0·4, Hindupur 0·2, Dharmavaram 0·4, Madakasíra 0·15, Uravakonda 0·65, Yadakki 0·65, Bukkapatnam 3·0; rainfall 2·48 inches above average.

23rd December 1885, No. 1397, Revenue.

Read—the following Telegram from Collector of Kurnool, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

District average—Rice 12·56, cholum 28·94, ragi 31·35, cumbu 30·09. Rainfall—Kurnool 1·06, Pattikonda 0·16, Rámallakót 1·06, Nandikótkur 0·88, Nandyál 1·15, Sirvel 2·31, Cumbum 3·90, Atmakúr 0·79, Owk 0·65, Dhone 0·50, Betamcheruvu 1·35, Márkápur report not received; no rain in Koilkuntla. Early cerials and paddy under harvest, outturn half to three-fourths; standing early crops injured by recent unseasonable rains. Small-pox in Cumbum taluk; cattle-disease, foot and mouth disease, in Nandyál taluk; attacks and deaths not reported by Tahsildar; will be reported on receipt of information. Pasture and water sufficient. Prices—rice falling in Cumbum and rising in Pattikonda; cholum rising in Pattikonda, Nandikótkur and Cumbum; cumbu rising in Pattikonda.

Read—the following Report from Collector of Madras, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

Rice (second sort) 12·08, cholum 16·41, cumbu 17·16, ragi 21·92. Health—Fever prevalent; no cholera; cattle healthy. Imports—Tons, rice 3, other grains 56. Rainfall 3·35.

Read—the following Report from Collector of Chingleput, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

Rice 14·06, ragi 26·63, cumbu 18·81, cholum 18·10. Health of people good in four taluks; fever in Madurántakam and Ponnéri, attacks 44; measles in Madurántakam, attacks 7, no loss; cattle good in three taluks, anthrax in Madurántakam, rinderpest and dysentery in Tiruvallúr and malignant sore-throat in Ponnéri, attacks 14, deaths 9. Crops good; kar is harvested in portions of Conjeeveram and Saidápet, average half. Pasturage good. Agricultural operations—Ploughing for, sowing and transplanting navarai; transplanting samba in Chingleput; weeding in Tiruvallúr. Water-supply sufficient. Rainfall—Sattiavedu 6·60, Ponnéri 5·65, Tiruvallúr 2·15, Poonamalle 3·15, Saidápet 2·50, Homes' Gardens 1·91, Sríperumbudúr 3·70, Conjeeveram 2·92, Chingleput 3·40, Madurántakam 2·97, Ootramallur 4·80; all reported. Prospects fair.

Read—the following Report from Collector of North Arcot, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

Rice 14·2, cholum 24·0, ragi 28·6, cumbu 23·2. Health—Fever prevails in parts of Chittoor and Palmanér taluks and small-pox in parts of the Punganúr division; anthrax, rinderpest and foot and mouth disease among cattle are reported during the week—

Taluks and Divisions.	Name of Disease.	Number of Attacks.	Number of Deaths.
Palmanér	Foot and mouth disease ...	Not reported	Not reported.
Gudiyátam	Do.	Do.	...
Pólúr	Do.	100	...
Wandiwash ...	Do.	Not reported by Revenue Inspectors.	...
Arcot	Rinderpest, foot and mouth disease.	Not reported by Village officers.	...
Wálajápet	Rinderpest	Not reported.	10 or 15.
Arni	Anthrax	1	...
	Foot and mouth disease	Not reported by Village officers.	...

The standing crops are generally in good condition; paddy and ragi were harvested during the week to a limited extent and the outturn was on the whole below the average. Agricultural operations are progressing, except in Palmanér taluk and Punganúr and Kangundi divisions where they are reported to be limited. Water-supply—Tanks generally have from one to six months' supply, except in the Palmanér and Gudiyátam taluks and Kangundi division where the supply of water in tanks is scanty. Rainfall—Arcot 5·15, Arkónam 2·91, Arni 4·10, Chandragiri 3·40, Chittoor 3·19, Gudiyátam 3·77, Kálahasti 5·70, Kuppam 1·10, Mádarpák 2·32, Palmanér 2·10, Pólúr 2·20, Punganúr 1·85, Puttúr 2·95, Tirupati 3·45, Tirutani 2·20, Vellore 3·10, Venkatagiri-kóta 1·10, Wálajápet 4·35, Wandiwash 2·38; the average rainfall up to date since January 1885 is 33·13 against 42·12 inches, the average of the past four years; more rain is needed.

READ—the following Report from Collector of South Arcot, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 14·93, cholum 26·88, ragi 32·79, cumbu 30·90.

Average price of cholum arrived at for past and previous weeks—

	Past week.	Previous week.
Tiruvannámalai	28·56	28·56
Chidambaram	25·20	21·84
Total ...	53·76	50·40
Average ...	26·88	25·20

Health generally good; small-pox and guinea-worm prevailed in parts of Tindivanam, and fever in parts of Tindivanam and Villupuram taluks; cattle were generally healthy, only one death by anthrax (அடைப்பான்) having been reported from Chidambaram; in Villupuram and Tirukoilúr, cattle were attacked with epizootic aphtha (கோமாரி), but the Tahsildars failed to give in their reports the number of attacks or of deaths; their attention has again been drawn to the omission and the information will be furnished invariably in future reports. The standing crops, viz., ragi, millet, varagu, cholum, horse-gram, gingelly and ground-nut on dry lands as well as sugar-cane, samba and kar-paddy on wet lands were generally good, but it is reported that samba crops suffered in parts of Tindivanam and Villupuram taluks from a disease called "Anaikkombu" (ஆனைக்கொம்பு), which prevents the growth of the ear; ground-nut and varagu were affected by insects, the former in parts of Tindivanam and Villupuram taluks, and the latter in parts of Tindivanam only; ragi was harvested in a few places in Kallakurchi and the outturn varied from 8 to 12 annas. Agricultural operations—Ploughing, manuring and weeding operations were in progress in several places; cumbu, varagu, gingelly and paddy were being sown, and paddy was being transplanted in some places. Water-supply generally good, except under the irrigation works breached by the floods of last year not yet fully repaired; there were moderate freshes in the Vellár, and slight ones in the Gadilam, Ponniár and Coleroon. Rainfall—Tindivanam 1·35, Merkanam 5·50, Gingee 1·70, Villupuram 3·65, Cuddalore 3·09, Panruti 1·75, Chidambaram 3·90, Mannárgudi 3·50, Kallakurchi 2·05, Tirukoilúr 2·28, Tiruvannámalai 2·10, Chengam 1·50; report from Vanur, Bhuvanigiri, Vriddháchalam, Titagudi and Ulundurpet not received; rainfall at Villupuram, Panruti, Gingee, Kallakurchi, Ulundurpet and Chengam for the previous week was 1·40, 1·25, 0·95, 1·68, 3·25 and 3·85 inches respectively; rainfall up to date from 1st January 1885, 43·10; average rainfall in three previous years 48·05.

N.B.—The average is given for all seventeen stations at which rain-gauges were kept, while the rainfall up to date in the current year is for nine stations only at which the rain-gauges were kept throughout the year.

READ—the following Telegram from Collector of Tanjore, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 14·10, cholum 24·71, ragi 28·25, cumbu 22·59. Rainfall—Tanjore 3·10, Kumbakónam 5·0, Máyavaram 4·42, Shiyáli 4·62, Nannilam 5·15, Negapatam 7·90, Tiruturaipúndi 8·60, Mannárgudi 5·20, Patukóta 2·50, Vallam 3·90, Tiruvádi

4·75, Tranquebar 3·70, Tiruválúr 7·65, Vedaraniem 10·75, Mutupet 6·90, Nídámangalam 4·90, Arantangi 3·15; rainfall above average. Prospects favorable. Rivers 1 to 7 feet. Crops good except in parts submerged in water in Tiruturaipúndi taluk. Harvest—Paddy, outturn below average. Health of people and cattle generally good; five deaths from cholera.

Read—the following Report from Collector of Trichinopoly, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 13·14, cholum 23·80, ragi 29·42, cumbu 26·50. Health very good; no cholera; slight small-pox and cattle-disease.

	Small-pox.	
	Attacks.	Deaths.
Perambalúr taluk	9	0
Pudukóta	15	4

	Cattle-disease (Dysentery).	
	Attacks.	Deaths.
Udayárpálaiyam taluk	2	4

Crops good. Agricultural operations—Paddy is sown in one taluk and transplanted in another taluk; paddy, ragi, cholum, cumbu and samai harvested; outturn paddy and ragi 12 to 16 annas, and the rest 6 to 12. Water-supply sufficient. Rainfall—Trichinopoly 2·25, Illuppúr 1·17, Lálgudi 3·50, Kulitalai 1·87, Manapárai 2·05, Musiri 2·07, Turaiyúr 2·50, Perambalúr 3·35, Jayankondacholapuram 3·70, Kílpaluvúr 4·60, Ariyalúr 2·67, Pudukóta Town 1·63, Viralimalai 0·40, Keelanilai 1·37, Trimiyam 1·10, Alangudi 1·40, Karambakúdi 3·85.

Read—the following Telegram from Collector of Madura, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 13·09, cholum 23·76, ragi 26·93, cumbu 21·42. Rainfall—Madura 1·82, Tirumangalam 2·35, Melúr 1·1, Periyakulam 1·97, Ramnad 3·03, Sivaganga 2·8, Morckulam 3·2, Tirushuli 4·15, Tirupatúr 3·2, Pámban 2·4, Nilakotta 0·97, Chinnammanúr 2·55; stations not reporting, 8; previous week Vattanam 3·5, Tirupatúr 2·85, Mudukolattur 1·5, Vedasendur 1·55, Usilampatti 1·2; rainfall below average. Health of people and cattle generally good; fever prevalent; no cattle-disease. Water-supply sufficient. Pasture fair; freshes in Vagai subsiding.

Read—the following Telegram from Collector of Tinnevelly, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 13·47, cholum 20·72, cumbu 18·99, ragi 24·73. Rainfall—Huzur 3·42, Tenkarai 2·35, Tinnevelly 3·07, Ambásamudram 4·0, Nánguneri 2·95, Srívilliputur 1·25, Sankaranainárkoil 3·95, Tenkási 2·1, Otapidáram 1·9, Sátúr 2·72, Tuticorin 1·8; rainfall since January 25·88 inches against 27·76 average; good freshes down Támbraparni. Agricultural operations continue. Health good; cattle well. Samai, ragi, cumbu, cholum and gingelly harvested in parts, outturn generally average; standing crops good.

Read—the following Report from Collector of Coimbatore, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 12·23, cholum 20·79, ragi 24·10, cumbu 25·66. Slight small-pox in Satyamangalam and slight fever in Pollàchi; foot and mouth disease to cattle in one village of Satyamangalam taluk, attacks 55, no deaths reported. Paddy good in eight taluks, and the state of paddy crop in Coimbatore improved by recent rain; cholum under wells good; cholum in punjah good in all taluks, but damaged by insects in parts of Satyamangalam; ragi under wells and in punjah good; cumbu in punjah good in seven taluks, but damaged by insects in parts of Satyamangalam; harvesting paddy in four taluks, outturn average in Dhárápuram and Polláchi, above average in Udamalpet and below average in Palladam; cholum under wells in Bhaváni, outturn below average; ragi under wells in three taluks, outturn average in Udamalpet, above average in Palladam and below average in Bhaváni; cumbu in punjah in five taluks, outturn average in Palladam and Polláchi and below average in Erode, Bhaváni and Udamalpet. Rainfall—Coimbatore 1·25, Mettupálaiyam 3·47, Satyamangalam 1·30, Tálavádi 0·73, Bhaváni 2·21, Erode 1·04, Perundurai 2·00, Karúr 1·05, Aravakurchi 1·74, Polláchi 1·30, Avanáshi 1·60, Dhárápuram 0·95, Kángyam 1·43, Udamalpet 1·32, Palladam 1·00, Kollegál 0·80. Weekly season report and price return not received from Kollegál.

READ—the following Telegram from Collector of Nílgiris, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice (second sort) 9·8, cholum 16·2, ragi 19·2, cumbu 20·6. Prices risen owing to daily rain and consequent short supplies. Health good. Crops good; korali harvest Tódanád impeded by rain; lands being ploughed. Water sufficient. Rainfall—Ootacamund 2·66, Kótagiri 5·45, Gúdalúr 1·75, Kaiti 6·52, Wellington 7·25, Deváła 2·20, Naduvatam 2·37, Pykara 2·16, Coonoor 10·52, Kódanád 5·96, Kundahs not received; last week Gúdalúr 0·20, Kundahs 0·70.

READ—the following Report from Collector of Salem, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 14·41, ragi 28·51, cumbu 25·44, cholum 22·19. Crops in good condition; oil-seeds affected by insects in parts of one taluk; paddy in three taluks, ragi in six, and cumbu in one, are being harvested, yield below the average. Rainfall not up to average. Agricultural operations—Paddy in four taluks, ragi in three, and cholum in one, are being sown. Health generally good, but fever in parts of Uttankarai; condition of cattle-disease in parts of two taluks—

Taluks.	Disease.	Number attacked.	Number died.
Námakal	Kolaimutti (கொலைமுட்டி)	2	2
Atúr	Foot and mouth disease	10	...

Water-supply sufficient for agricultural purposes except in three taluks. Rainfall—Salem 0·62, Námakal 0·75, Tiruchengód 0·80, Atúr 1·35, Hosúr 0·85, Dharmapuri 1·70, Tirupatúr 0·60, Krishnagiri 0·80, Uttankarai 0·60, Shevaroy Hills 2·90, Rájapuram 0·95, Omalúr 0·60, Paramathi 1·00, Sankaridrug 1·30, Denkanikóta 0·90, Pennagaram 1·20, other stations *nil*; Omalúr, Pennagaram, Vániyambádi, Harúr last week *nil*.

READ—the following Telegram from Collector of South Canara, to Secretary to Government, Revenue Department, dated 21st December 1885:—

Rice 14·86, ragi 23·69. Slight fever in parts of all taluks; measles in some villages of all taluks except Coondapoor; malignant sore-throat among cattle in Uppinangadi, attacks 9, deaths 3; foot and mouth disease Udipi, attacks 68, deaths none; diarrhœa in Udipi, attacks 13, deaths 6. Second rice-crop plants generally in fair condition. Water-supply sufficient. Rainfall—Mangalore 0·1, Bantvál 0·6, Karkal 0·05, Puttur 0·25, Beltangadi 0·32, Kásaragód 0·02, Hosdrug 0·47; Udipi, Coondapoor *nil*.

914-

READ—the following Telegram from Collector of Malabar, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

Rice 13·14, ragi 22·44. Small-pox slight in seven taluks; fever in Wynaad and Wálawanád; cholera in Wálawanád, 43 cases, 24 deaths. Second-crop cultivation partially injured by insects in Wálawanád. Cattle-disease in Wálawanád, 21 attacks, chiefly aphtha and hoof disease, one death. Pasture fair. Rainfall—Cannanore 1·25, Tellicherry 0·75, Badagara 0·5, Calicut 3·02, Chevayur 1·17, Manantoddy 0·25, Vayitri 1·25, Manjeri 0·73, Tirurangádi 1·15, Angádipuram 1·3, Pálghat 1·2, Ponáni 0·82, Cochin 3·08; Nilambúr *nil*.

READ—the following Telegram from Dewan of Travancore, to Secretary to Government, Revenue Department, dated 21st December 1885 :—

Season telegram, Trivandrum. Paddy in good condition. Price—Madras second-sort rice 9·6 and paddy 25 seers per rupee. Fever in some places. Week's rainfall 0·365.

ORDER—dated 23rd December 1885, No. 1397, Revenue.

Miscellaneous.

Communicated to the Board of Revenue.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Sanitary Commissioner for Madras.
,, the Chief Engineer for Irrigation.
,, the Surgeon-General with the Government of Madras.
,, the Financial Department.

Exd. W. H. French.

100 Copies.

Govt. of {1885} Madras.

REVENUE.

No. 134

Communicated to the Officers in charge of Settlement arties and to the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 18 January 1886.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No. III
" " Special Assistant Collector, Nilgiris and Malabar.
" " Inspector of Cattle Diseases.

Issued

Recd. *Encl.*

G.O., 23rd December 1885, No. 1397.

DECEMBER.

Season.

Reports on the state of — for week ending 19th December 1885, communicated to the Board of Revenue.

RECEIVED
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915

31st December 1885, No. 1399, Revenue.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Season Reports for the Week ending 26th December 1885.

Read—the following Telegram from Collector of Ganjam, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 13·62, ragi 28·42, cholum 23·24, cumbu 31·5. Rainfall—Ganjam 4·7, Chatrapur 4·07, Berhampore 3·31, Purushottapur 2·0, Aska 1·63, Goomsur 3·1, Ichápur 2·88, Sómpet 1·5, Tekkali 6·5, Chicacole 4·76, Parlákimedi 5·3, Gopálpur 3·0, Púndi 2·22, Calingapatam 3·1, Udayagiri 2·55 ; no report Suradá ; last week rain Gopálpur 0·08 ; three fresh rain-gauges despatched to be immediately restored. Small-pox in Berhampore taluk, one death reported ; cholera deaths 12 ; cattle-disease Ganjam and Narsannapet, rinderpest ; Berhampore rinderpest and flatulent colic ; so far as information available, attacks 62, deaths 49. Harvest of paddy nearly over ; estimate of outturn 8-anna crop.

Read—the following Telegram from Collector of Vizagapatam, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 13·59, cholum 25·4, ragi 28·91, cumbu 29·34. Small-pox two taluks ; cholera five taluks, 36 deaths ; fever six ; no cattle-disease. In Pálkonda, Párvatipur and Agency tracts, all crops good ; elsewhere dry crops fair, but paddy suffering from blight ; harvested paddy here and there in six taluks, outturn estimated in Golgonda 8 annas, Gajapatinagar 2, Srungavarapukóta 8, Vizianagrum 6, Anakápalle, Yiravilli 4 annas each ; ragi in six taluks ; ulundu in Viravilli, outturn $\frac{1}{2}$; green-gram in Sarvasiddhi, Srungavarapukóta, outturn $\frac{1}{2}$; cholum in Gajapatinagar, outturn $\frac{1}{2}$; black-paddy, ragi, green-gram sown here and there in Anakápalle, Pálkonda, Chípuru-palle, Gajapatinagar ; ragi transplanted in Sarvasiddhi, Bimlipatam, Gajapatinagar. Water-supply sufficient. Rainfall above average by nine-tenths ; Anakápalle 1·4, Bimlipatam 0·75, Chípurupalle 2·8, Kuppili 2·2, Narsapatnam 1·9, Pálkonda 3·0, Párvatipur 1·9, Sálúr 2·1, Viravilli 2·6, Vizianagrum 2·1, Waltair 0·35, Yellaman-chilli 1·7, Koraput 0·75, Rayaghada 2·3 ; no report from Balacheruvu ; gauges from Bobbili, Gajapatinagar, Gúdem, Srungavarapukóta, Kòtipad, Malkangiri, Naurangapur withdrawn 1st April ; Paderu, Pottungi, 8th April ; Gunipur, 17th March.

Read—the following Telegram from Collector of Godávari, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 14·50, cholum 26·07, ragi 30·00, cumbu 33·33. Fever and small-pox slight ; cholera 32 deaths five taluks ; no cattle-disease. Standing crops generally good ; paddy being harvested, outturn $\frac{3}{4}$; dry crops being sown. Godávari water 8·50 feet above lock-sill. Rainfall—Amálapuram 7·15, Cocanada 2·03, Ellore 2·20, Narsápur 1·50, Peddápuram 2·20, Pentapadu 1·10, Alamúr 3·55, Polavaram 2·0, Ráma-chandrapuram 7·10, Sivakodu 2·75, Tanuku 2·20, Tuni 3·50, Yernagúdem 3·0, Bhadráchalam 0·35, Kottapeta 3·20 ; rainfall to date is above average.

Read—the following Telegram from Collector of Kistna, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 12·94, cholum 21·24, ragi 26·97, cumbu 23·32. Rainfall—0·7 Répalle, 0·35 Bápatla, 1·5 Guntúr, 0·7 Dáchepalli, 0·72 Narsaraopet, 0·8 Krósúr, 0·42 Bandar, 1·1 Nandigáma, 0·1 Bezváda, 0·95 Vinukonda, 3·0 Tiruvur, 2·4 Gunnavaram, *nil* Gudi-váda ; rainfall 1st January to date 32·11, against average last three years 39·11. Later dry crops sown in places; standing crops generally good; dry paddy harvested, outturn about $\frac{1}{2}$; rice-crop harvest commencing. Fever prevalent; small-pox and guinea-worm slight; cholera in Répalle and Bezváda taluks, attacks 8, deaths 3; cattle, condition good. 2·3 feet water over anicut.

Read—the following Telegram from Collector of Nellore, to Secretary to Government, Revenue Department, dated 29th December 1885:—

Rice 14·0, cholum 25·16, ragi 31·4, cumbu 28·86. Health generally good; small-pox in Nellore, Kandukúr; fever in Kanigiri; epizootic aphtha, rinderpest in Nellore, Kávali, Kandukúr, Gúdúr, attacks 48, deaths 46. Crops standing fair; aruga harvested in Kávali, outturn 10 annas. Agricultural operations—Ragi, paddy being sown in some places. Water-supply sufficient. Rainfall—Kanigiri 0·6, Darsi 0·6.

Read—the following Report from Collector of Cuddapah, to Secretary to Government, Revenue Department, dated 28th December 1885:—

Average of the district—Rice 13·53, cholum 29·20, ragi 33·26, cumbu 30·30. Health good in Jammalamadugu, Proddutur, Sidhout, Ráyachóti and Váyalpád taluks; in others a few cases of fever reported in some villages as well as small-pox in some places of Cuddapah and Madanapalle taluks; cattle reported suffering from Jabbavapu (swelling of the thigh) in Guntapalli of Badvél taluk, 10 attacks and 10 deaths; and in Sompatycota of Madanapalle taluk, 13 attacks and 2 deaths; in others good. Standing crops good; the following crops harvested, average outturn reported to be paddy $\frac{3}{4}$, cholum $\frac{5}{8}$, korra $\frac{1}{2}$, arika $\frac{1}{2}$, indigo $\frac{3}{4}$ and ragi $\frac{3}{4}$. Agricultural operations—Clearing channels, irrigating crops under wells, sowing ragi in some places; and in others preparing lands for sowing korra, ragi, paddy, indigo and cholum; harvesting paddy and cholum and weeding. Water-supply—All the tanks in Pullampet taluk and some of the tanks in Ráyachóti, Váyalpád and Madanapalle taluks received full supply and others partial supply; Pullanger, Gunjana and Cheyér rivers reported still flowing; river and spring-channels and wells contain good supply. Rainfall—Badvél 0·55, Proddutur 0·50, Jammalamadugu 0·05, Pulivendla last week 0·50, Kadiri 1·00, Váyalpád 1·00, Madanapalle 1·17, Chitvél 0·60, Kamalápuram 0·80, other stations *nil*.

Read—the following Telegram from Collector of Bellary, to Secretary to Government, Revenue Department, dated 28th December 1885:—

Rice 12·62, white-cholum, 25·29, yellow-cholum 28·97, ragi 33·17, cumbu 25·72. Rainfall—Siruguppa 0·70. Health generally good; fever in parts of Kúdligi and Alúr; one attack Alúr from cholera. Sowing paddy Hospet taluk; early dry crops much improved in Kúdligi and Harpanahalli; oil-seeds attacked by caterpillars; white-cholum at Kúdligi attacked with disease; wet crops good; harvesting paddy, cholum, cumbu, korra, oil-seeds, pulses, ragi, yield average in parts and below average in others.

Read—the following Telegram from Collector of Anantapur, to Secretary to Government, Revenue Department, dated 28th December 1885:—

Rice 13·5, cholum 28·55, ragi 31·53, cumbu 25·85. Health generally good; small-pox in two villages of Gooty and Dharmavaram taluks. Pasture procurable. No cattle-disease reported. Standing wet and dry crops generally fair; cholum in parts of Gooty and Tadpatri, and castor in parts of Madakasíra, blighted; paddy, jonna, tobacco, ragi, bengal-gram and wheat being sown under channels, wells and tanks having a supply in parts of Anantapur, Tadpatri, Hindupur, Dharmavaram and Madakasíra; ploughing in five taluks; castor, gingelly, green-gram, korra and paddy being harvested in three taluks; outturn Gooty between 8 and 12 annas, Hindupur 4 and 12 annas, Dharmavaram 8; and water-supply fair. Rainfall—Uravakonda 0·11, Bukkapatnam 0·4, Kalyándrúg 0·3; rainfall 2·57 about average.

Read—the following Telegram from Collector of Kurnool, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

District average—Rice 12·56, cholum 29·33, ragi 33·00, cumbu 31·22. Rainfall omitted last week, Márkápur 1·27 ; this week Pattikonda 0·62, Koilkuntla 1·10, Sirvel 0·16, Cumbum 0·05, Márkápur 1·90, Owk 0·13, Dhone 0·20 ; no rain in six stations. Standing early crops injured in parts by recent unseasonable rains ; paddy being harvested, yield ½ to ¾. Small-pox in Cumbum ; cattle-disease (foot and mouth disease) in Nandiyál taluk, attacks 386, deaths 11 ; Cumbum taluk, attacks 200, deaths none ; dysentery in Cumbum taluk, attack 1, death none. Pasture and water sufficient. Prices—cholum falling in Pattikonda and rising in Nandikótkur ; cumbu falling in Pattikonda and Márkápur ; other articles stationary.

Read—the following Report from Collector of Madras, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice (second-sort) 12·08, cholum 16·41, cumbu 17·16, ragi 21·92. Health—Fever prevalent ; no cholera ; cattle healthy. Imports—Tons, rice *nil* ; other grains 58. Rainfall *nil*.

Read—the following Report from Collector of Chingleput, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 14·00, ragi 26·89, cumbu 16·50, cholum 18·10. Health of people good in four taluks ; fever in Ponnéri and Madurántakam, attacks 35 ; measles in Madurántakam, attack 1, no loss ; cattle good in three taluks ; malignant sore-throat in Ponnéri and Tiruvallúr ; rinderpest in Tiruvallúr ; anthrax in Madurántakam, attacks 17, deaths 15. Crops good ; kar is harvested in portions of Conjeeveram and Tiruvallúr taluks, average half. Pasturage good. Agricultural operations—Ploughing for, sowing and transplanting navarai ; weeding in Tiruvallúr. Water-supply sufficient. Rainfall—Ponnéri 0·17, Tiruvallúr 0·70, other stations *nil* ; all reported. Prospects fair.

Read—the following Report from Collector of North Arcot, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 14·4, cholum 25·5, ragi 28·3, cumbu 23·3. Health—Fever prevails in parts of the Chittoor taluk and Venkatagirikóta division, and small-pox in parts of Arcot taluk and Punganúr and Kangundi divisions ; anthrax, rinderpest and foot and mouth disease among cattle are reported during the week—

Taluks and Divisions.	Name of Disease.	Number of Attacks.	Number of Deaths.
Gudiyátam	Foot and mouth disease.	215	...
Pólúr	Do.	Not reported.	4
Do.	Anthrax...	Do.	Not reported.
Arcot	Do.	Do.	2
Do.	Foot and mouth disease.	Do.	...
Wálajápet	Rinderpest	1	1
Arni	Foot and mouth disease.	37	...

The standing crops are generally in good condition ; paddy, ragi, cholum and varagu were harvested during the week to a limited extent, and the yield was on the whole below the average. Agricultural operations are progressing, except in the Palmanér taluk and Punganúr and Kangundi divisions where they are reported to be limited. Water-supply—Tanks generally have from 1 to 6 months' supply, except in the

Palmanér taluk and Kangundi division where the supply of water in tanks is scanty. Rainfall—Arcot 0·08, Arni 0·50, Chittoor 0·78, Gudiyátam 2·05, Kálahasti 0·80, Kangundi 1·00, Madarpâk 5·65, Pólúr 2·40, Punganúr 1·05, Tirupati 0·80, Vellore 0·85, Venkatagirikóta 1·40; no rain fell during the week in the seven other stations where rain-gauges are kept; the average rainfall up to date since January 1885 is 34·04 inches against 42·30 inches, the average of the past four years; more rain is needed.

Read—the following Report from Collector of South Arcot, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 14·81, cholum 27·72, ragi 31·34, cumbu 29·92.

Average Price of Cholum arrived at for past and previous Weeks.

	Past Week.	Previous Week.
Tiruvannámalai	28·56	28·56
Chidambaram	26·88	25·20
Total ...	55·44	53·76
Average ...	27·72	26·88

Health generally good; fever prevailed in parts of Tindivanam and Vriddháchalam, and small-pox in parts of Tindivanam and Villupuram taluks; cattle generally healthy; in Chidambaram and Tiruvannámalai taluks 112 attacks and 92 deaths from anthrax (அடைப்பான்) were reported; in Tirukoilúr 150 attacks of epizootic aphtha ( ) were reported, but only two cases proved fatal. The standing dry crops, viz., ragi, varagu, millet, cholum, horse-gram, gingelly and ground-nut, and wet crops, paddy and sugar-cane, were generally in good condition; ragi was harvested in parts of Vriddháchalam and ground-nut was dug out in parts of Tirukoilúr, the outturn of ragi varied from 8 to 12 annas and that of ground-nut was only 4 annas. Agricultural operations—Ploughing and weeding operations were in progress in several places; paddy was sown and transplanted in several localities, and gingelly was sown in parts of Villupuram taluk. Water-supply generally good; slight freshes were received in the Ponniár, Gadilam, and Manimuktanadhi; the freshes in the Vellár were heavier. Rainfall—Tindivanam 0·40, Merkanam 0·15, Villupuram 0·30, Vanur 0·25, Cuddalore 2·33, Chidambaram 4·20, Bhuvanigiri 1·40, Mannárgudi 3·20, Vriddháchalam 0·60, Tirukoilúr 0·10, Tiruvannámalai 1·20, Chengam 3·25, Titagudi *nil*; reports from Gingee, Panruti, Kallakurchi, Ulundurpet not received; rainfall in previous week at stations not then reported was Vanur 3·65, Bhuvanigiri 5·30, Vriddháchalam 3·73, Titagudi 1·80, Ulundurpet 2·73; rainfall up to date from 1st January 1885, 44·56; average rainfall in three previous years, 48·57.

N.B.—The average is given for all the seventeen stations at which rain-gauges were kept, while the rainfall up to date in the current year is for nine stations only at which the rain-gauges were kept throughout the year.

Read—the following Telegram from Collector of Tanjore, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 14·06, cholum 25·13, ragi 28·62, cumbu 22·83. Rainfall—Tanjore 2·10, Kumbakónam 1·80, Máyavaram 2·25, Shiyáli 2·40, Nannilam 0·75, Negapatam 1·45, Tiruturaipúndi 1·75, Mannárgudi 0·80, Patukótai 1·53, Vallam 2·20, Tranquebar 2·80, Tiruválúr 2·78, Vedaraniem 2·0, Mutupet 3·0, Nídámangalam 2·60, Arantángi 1·55; report not received from Tiruvádi; rainfall above average. Prospects favorable. Rivers 2 to 7 feet. Crops generally good. Harvest—paddy, ragi, outturn below average. Health of people and cattle generally good.

Read—the following Report from Collector of Trichinopoly, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice (second sort) 13·14, cholum 23·80, ragi 29·42, cumbu 27·35. Health very good; no cholera or small-pox; no fresh attacks of cattle-disease; 7 attacks and 1 death of small-pox in Pudukóta State. Standing wet and dry crops good, except the samba and kodai-kar injured by floods in the jungle stream Pilaru in Kulitalai taluk. Agricultural operations—Cholum, horse-gram sown; paddy, ragi, cholum, cumbu, varagu, samai harvested, outturn of the first two 6 to 16 annas and the rest 6 to 12 annas. Water-supply sufficient. Rainfall—Trichinopoly town 0·30, Iluppúr 0·80, Lálgudi 0·85, Kulitalai 0·13, Manapárai 2·50, Musiri 0·35, Turaiyúr 0·20, Jayankondacholapuram 2·00, Kílpaluvúr 2·20, Ariyalúr 1·57, Perambalúr 0·85; Pudukóta town 0·50, Trimiyam 0·40, Alangudi 0·40, Karambakudi 0·50.

Read—the following Telegram from Collector of Madura, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 13·2, cholum 23·22, ragi 26·64, cumbu 22·05. Rainfall—Madura 1·5, Tirumangalam 0·2, Melúr 2·5, Palni 1·37, Sivaganga 0·6, Vattanum 1·75, Morekulam 0·72, Pámban 1·0, Kodaikánal 1·98, Chinnammanúr 0·6, Usilampatti 2·2, Tirushuli 1·65; stations which had no rain, 3; stations not reporting, 5; previous week, Vattanum 7·5, Muturagunáthapatnam 4·15, Mutukulatúr 3·64, Vedasendur 2·05, Kodaikánal 4·16, Tirushuli 1·45, Dindigul 3·08, Palni 1·4; rainfall below average. Health of people and cattle generally good; fever prevalent; cattle-disease in Madura taluk, attacks with braxy 33, deaths 20. Water-supply sufficient. Pasture fair.

Read—the following Telegram from Collector of Tinnevelly, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 13·47, cholum 20·46, cumbu 19·13, ragi 24·97. Rainfall—Huzur 3·45, Tinnevelly 5·0, Tenkarai 1·05, Ambásamudram 3·15, Nánguméri 0·7, Srívilliputur 3·4, Sankaranainárkoil 0·7, Tenkási 1·22, Otapidáram 1·5, Tuticorin 0·17, one station *nil*; rainfall since January 27·73 against 28·93, average. Támbraparni fairly full. Agricultural operations continue. Standing crops good. Public health good; cattle suffer in parts from malignant sore-throat, 35 cases, 30 deaths. Samai, ragi and cumbu harvested, outturn nearly average.

Read—the following Report from Collector of Coimbatore, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 13·54, cholum 20·89, ragi 26·51, cumbu 25·48. Slight fever in Polláchi; foot and mouth disease to cattle in two villages of Satyamangalam and Polláchi, attacks 87, deaths 4. Paddy good; cholum under wells good in five taluks and fair and damaged by excessive rain in parts of Palladam; cholum in punjah good in seven taluks, fair and damaged by excessive rain and insects in Palladam and by insects alone in parts of Satyamangalam; ragi under wells and in punjah good; cumbu in punjah good in seven taluks, and damaged by insects in parts of Satyamangalam; harvesting paddy in four taluks, outturn average in Karúr, Dhárápuram and Polláchi and below average in Palladam; cholum in punjah in three taluks, outturn below average; ragi under wells in three taluks, outturn average in Palladam and Udamalpet, and below average in Bhaváni; cumbu in punjah in five taluks, outturn average in Karúr, and below average in Erode, Bhaváni, Dhárápuram and Palladam. Rainfall—Coimbatore 0·69, Satyamangalam 0·50, Tálavádi 0·80, Bhaváni 3·12, Erode 4·60, Perundurai 6·10, Karúr 0·51, Aravakurchi 3·52, Palladam 4·40, Avanáshi 4·80, Dhárápuram 1·53, Kángyam 2·00, Udamalpet 0·80, Polláchi 0·35, Kollegál 0·70, one station *nil*; weekly season report from Kollegál not received.

Read—the following Telegram from Collector of Nílgiris, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 9·5, cholum 15·6, ragi 19·4, cumbu 19·2. Health good. Crops good; average yield half; lands being tilled; coffee and paddy being harvested. Water sufficient. Rainfall—Ootacamund 0·59, Kótagiri 2·0, Gúdalúr 2·62, Wellington 3·0, Naduvatam 2·05, Pykara 0·80, Kódanád 1·97, others not received; last week Kundahs 2·96.

Read—the following Report from Collector of Salem, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 14·14, ragi 28·61, cumbu 24·98, cholum 21·28. Crops in good condition; oil-seeds in two taluks and paddy in one are affected by insects; paddy in five taluks, ragi in five, cumbu in one, and cholum in one, are being harvested, yield below the average; rainfall not up to average. Agricultural operations—Paddy in six taluks, ragi in three, and cholum in two, are being sown. Health generally good, but fever in parts of two taluks; condition of cattle :—

Taluk.	Disease.	Number attacked.	Number died.
Salem	Foot and mouth disease ...	41	...

Water-supply sufficient for agricultural purposes, except in three taluks. Rainfall—Salem 1·21, Námakal 1·08, Tiruchengód 2·70, Atúr 0·55, Hosúr 5·20, Dharmapuri 2·50, Tirupatúr 1·05, Krishnagiri 0·55, Uttankarai 0·55, Rájapuram 0·40, Omalúr 1·20, Denkanikóta 2·30, Vániyambádi 0·10, Harur 2·65; Shevaroy Hill return not received; other stations *nil.*

Read—the following Telegram from Collector of South Canara, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 14·86, ragi 24·13. A few cases small-pox in three taluks; slight fever and measles in parts; 67 cattle attacked with foot and mouth disease in Udipi taluk; no deaths. Second rice-crop in fair condition. Water-supply sufficient. Rainfall—Mangalore 0·17, Bantvál 1·77, Udipi 2·62, Karkal 1·2, Puttur 0·28, Beltangadi 4·15, Coondapoor 0·26, Kásaragód 0·7, Hosdrug 0·35.

Read—the following Telegram from Collector of Malabar, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Rice 13·33, ragi 23·45. Small-pox slight in seven taluks; fever in Wynaad and Wálawanád; cholera in Wálawanád, 25 cases 12 deaths. Second-crop cultivation in fair condition. Cattle-disease in Calicut and Wálawanád, 24 attacks, chiefly aphtha and hoof disease, 1 death. Pasture fair. Rainfall—Cannanore 1·2, Tellicherry 0·95, Badagara 0·6, Manantoddy 1·4, Vayitri 1·25, Calicut 0·62, Chevayur 0·15, Manjeri 1·27, Angádipuram 1·95, Pálghat 2·82, Ponáni 1·6, Cochin 0·8, Tirurangádi 2·8, Nilambúr 1·79.

Read—the following Telegram from Dewan of Travancore, to Secretary to Government, Revenue Department, dated 28th December 1885 :—

Season telegram, Trivandrum. Paddy in ear and thriving. Price—Madras second-sort rice 9·6 and paddy 25 seers per rupee. Fever in some places. Week's rainfall 1·349.

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Order—dated 31st December 1885, No. 1399, Revenue.

Miscellaneous.

Communicated to the Board of Revenue.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Sanitary Commissioner.
,, the Chief Engineer for Irrigation.
,, the Surgeon-General with the Government of Madras.
,, the Financial Department.

Exd. W. H. French.

100 Copies.

Govt. of {1885} Madras.

REVENUE.

No. 136

Communicated to the Officers in charge of Settlement arties and to the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 18 January 1886.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No. III
" " Special Assistant Collector, Nilgiris and Malabar.
" " Inspector of Cattle Diseases.

Issued

Recd. *Encl.*

G.O., 31st December 1885, No. 1399.

DECEMBER.

Season.

Reports on the state of — for week ending 26th December 1885, communicated to the Board of Revenue.

RECEIVED [illegible]

3rd December 1885, No. 1341, Revenue.

919

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Proceedings of the Board of Revenue, dated 12th June 1882, No. 1517 :—

Read—G.O., dated 17th February 1882, No. 200, Revenue.

Abstract.—Passing remarks on Board's Proceedings regarding contributions from Imperial revenue to village service fund, and retransmitting the subject for reconsideration.

Resolution—dated 12th June 1882, No. 1517.

As observed by Government there is no doubt that the existing village establishments are starved both as to numbers and emoluments, that the existing funds are altogether insufficient to provide what is needed, and that the State is not paying what it should to the fund.

2. The Board have already shown that, in almost all the former settlements, the fees of village officers were deducted from the gross produce prior to the determination of the respective shares of Government and landholders, and that thus the payment of fees fell in equal shares upon the ryot and upon the State, but that no such deduction having been made in the present settlement, Government are contributing nothing except, to a very small extent, in the way of fixed contributions. These, however, are not based on a sound principle, and should be withdrawn except so far as they represent the value of inams resumed. As regards the rate of contribution to be paid by Government, the Board admit that, if the ancient usage is to be followed, it should be the same as that at which ryots are made to pay, though, for the reasons assigned, they recommended a lower rate. They have now only to show that the existing establishments are altogether inadequate and are miserably underpaid, and that the need for increased funds is urgent.

3. First, in regard to numbers, the subjoined statement shows the number of villages, as recognized by the survey, contained in each district or portion of a district in which the establishments have been revised and the number of servants entertained both prior to and since the revision of the establishment :—

Districts.	Number of Government Ryotwari villages in the district or portion of the district in which Village Establishments have been revised.	Number of Curnams		Number of Munsifs		Number of Monegars		Number of Talayaries and Vetties		Number of Nirganties	
		Prior to revision.	As per revision.	Prior to revision.	As per revision.	Prior to revision.	As per revision.	Prior to revision.	As per revision.	Prior to revision.	As per revision.
Godávari	824	1,690	743	2,462	743	..	..	4,298	2,723	14	118
Kistna	1,141	2,091	1,141	1,203	1,141	..	471	5,287	5,161	..	312
Nellore	596	1,240	588	878	595	505	339	5,476	2,747	317	193
Cuddapah	659	915	651	..	651	1,150	424	4,999	2,776	278	242
Kurnool	700	Not known.	727	Not known.	862	Not known.	..	Not known.	4,669	Not known.	252
Chingleput.. ..	1,465	1,222	854	1,477	1,312	628	57	4,134	2,959	103	14
South Arcot ..	396	196	223	141	337	446	45	726	1,043	..	..
Trichinopoly ..	1,245	813	810	..	..	2,662	868	5,607	1,826	..	..
Tinnevelly	887	1,548	727	1,500	850	..	164	3,660	3,027	389	170
Salem	2,891	673	864	1,232	2,010	5	158	3,045	4,618	..	..

4. From the above it will be seen that at the revision, the number of village servants was materially reduced in almost every district, the reduction having been effected partly from a desire to improve the position of individuals, and partly with a view to economy owing to inadequate means.

5. In the case of curnams, it was considered good policy to allow only one curnam for each village, and leave him to appoint, at his own expense, the necessary number of assistants, the object being to avoid division of responsibility and consequent disputes. It may, however, be doubted whether this arrangement has been attended with success. It has been found in practice that curnams do not secure the assistance which is necessary to enable them to accomplish all that is required of them and the result is that their work is often done in a perfunctory and unsatisfactory manner. Again the attendance of the curnam is frequently required at the taluk cutcherry, and during his absence his village duties are neglected. The Board are therefore of opinion that it is desirable that in every village two curnams should be employed, while in large villages three or even four are needed.

6. In Kurnool a few assistant curnams have been recently entertained at the expense of the village service fund; their nomination, however, is left to the chief curnam, subject to the approval of the divisional officer. Similar arrangements should be made nearly everywhere, and though not at present prepared to state the exact number of additional men that would be required, the Board have no hesitation in saying that the total number now employed should be doubled.

7. Turning to the village headman, it is observed that in most villages the duties of the munsif (village judge) and of the monegar (revenue headman) are combined, whereas, if sufficient funds were available, it would seem to be desirable that the revenue office should be distinct from the judicial, at least in all large villages. The Board are unable to state exactly in how many villages in which the two offices are now combined a new monegar should be appointed, but they think that the additional number of men required will not be less than one-fourth of the existing number of munsifs.

8. The Board are also unable to say, without consulting Collectors, what increase is required in the number of talayaries and vetties, but there seems to be no doubt that the existing number is very insufficient.

9. Applications are also being received for an increase in the number of nirganties.

10. As regards salaries, the following statement shows the rates of salaries *per mensem* allowed in each district :—

District.	Curnam.	Munsif and Monegar.	Talayari and Vetti.	Nirganti.
	RS.	RS.	RS.	RS.
Godávari	From 20 to 5	From 12 to 1½	4	4
Kistna	,, 20 to 5	,, 12 to 3	From 4 to 2	From 3 to 2
Nellore	,, 20 to 5	,, 12 to 4	,, 4 to 2	,, 3 to 2
Cuddapah	,, 18 to 5	,, 12 to 3	,, 4 to 2	,, 3 to 2
Kurnool	,, 15 to 5	,, 25 to 6	5 and 4	4 and 3
Chingleput	,, 14 to 3	,, 9 to 2	From 4 to 1	From 3 to 2
South Arcot	,, 13 to 5	,, 9 to 4	,, 3 to 2	3 & 2
Trichinopoly	,, 9 to 6	3½ and one at Rs. 15.	3	...
Salem	,, 10 to 3	From 7 to 2	From 3 to 1	...
Tinnevelly	,, 15 to 5	,, 10 to 3	,, 4 to 2	3

11. It must be borne in mind that out of the salaries allowed to curnams, they are expected to pay their own assistants, and though the salaries in the higher classes of villages have the appearance of being sufficiently large, yet they are not so in

reality, and the lower rates of pay obtain in the great majority of villages—*vide* statement D. Considering their work, their responsibilities, and the knowledge they must acquire, the area they have often to inspect, and the present prices of food, the Board are of opinion that the salary of a curnam should in no case be less than Rs. 8 *per mensem*, and that of the chief curnam of all important villages should be at least as much as that of a clerk in a Tahsildar's office, *i.e.*, Rs. 15 *per mensem.*

12. The salaries of munsifs and monegars, excepting towns where special rates are allowed, vary from 15 to $1\frac{1}{2}$ rupees. The maximum rate is fair enough, but the rates of $1\frac{1}{2}$, 2, or even 3 rupees are ridiculously low, lower even than those allowed to vetties who have to work under the orders of the headman. If munsifs and monegars are to be paid at all, the Board are of opinion that the salaries should be respectable, and ought not to be less than 8 rupees per mensem. The munsifs and monegars of important villages should be remunerated at least at the same rates as those at which the curnams, who are essentially their subordinates, are paid.

13. It is hardly necessary to point out that the wages of one rupee and two rupees a month allowed to the lower class of village servants is altogether inadequate; pay on such a scale implies that the recipients thereof obtain other remuneration which it is to be feared, often assumes the form of a kind of black-mail paid freely or otherwise by the villagers. Obviously this is an unsatisfactory state of things, and the pay of these servants should be raised to the level of the wages which an ordinary day-laborer can earn, that is to say, Rs. 5 a month.

14. The Board trust that the above facts sufficiently explain the necessity for increasing the numbers and salaries of village servants, but they regret that they are at present unable to calculate the exact amount of funds necessary for the revision, supposing, however, that the present number of curnams is to be doubled, the salary allowed to each being Rs. 10 on an average, that one monegar and one munsif be allowed to each important village on a salary of Rs. 10 on the average, that the existing number of talayaries and vetties be augmented by at least one-fourth, with a salary of Rs. 5 to each, and that the existing number of nirganties also be doubled and their salaries raised to Rs. 5 per mensem, the additional funds required will amount to $35\frac{1}{2}$ lakhs* of rupees which is far in excess of the amount (Rs. 9,14,053) that will be added to the present assets by Government contributing a sum equal to the rate of the village cess now imposed under the Act.

15. With the limited assets available, it will not, of course, be possible to carry out all the improvements above suggested, but the figures given show that the existing funds are altogether inadequate, and that there is ample scope for utilizing any further sums which may be placed at the Board's disposal.

16. With reference to the remark made by Government that in the amount of Government contribution to be discontinued, the village cess included in the assessment in the Masulipatam portion of the Kistna district is included, although in fact it represent the ryots' due, the Board beg to observe that they have *not* so included the cess in the amount to be discontinued, but have simply refrained from demanding the newly proposed $3\frac{1}{8}$ per cent. on the revenue. Their reason for this was that, although the assessment in the Masulipatam portion of the district was declared to include the village cess payable by the ryot, still the cess was not in reality added to the assessment as was done in Kurnool. The assessment was arrived at in the same way as in other districts, in which the cess is charged separately, and the Board therefore thought it fair that the State should not be called upon to pay more than they are already paying from the assessment. If Government, however, are disposed to regard the present State payment in the Masulipatam portion of the Kistna district as the

Paragraph 4 of Mr. Barlow's letter embodied in the Government Order under reply.

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* *Vide* statement A.

ryots' due *actually* included in the assessment, a further amount equal to the contribution now made will have to be paid by the State.

17. A statement marked B, showing the amount which will have to be contributed by Government in the districts already settled, supposing that the rate will be the same as that now contributed by the ryot, is appended. In this statement, the village cess included in the assessment in the Masulipatam portion of the Kistna district is regarded as the ryots' contribution, and provision is made for a further allotment from the State revenues as has been done in the case of Kurnool and other districts.

18. A statement marked C, showing the present assets and charges under Village Service Fund in the districts or portions of the district in which the settlement has been introduced, and the village cess imposed or about to be imposed is also enclosed.

A.—STATEMENT showing the existing and proposed Number of the Village Servants and their Cost.

Districts.		CURNAMS.		MUNSIFS AND MONEGARS.		TALAYARIES AND VETTIES.		NIRGANTIES.		Total of all Servants' Cost.
		Number.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.	
1		2	3	4	5	6	7	8	9	10
			RS.		RS.		RS.		RS.	RS.
Godávari ..	Present ..	743	42,906	743	80,580	2,723	1,30,704	118	5,664	2,59,854
	Future ..	1,486	1,78,320	929	1,11,480	3,404	2,04,240	236	14,160	5,08,200
	Increase ..	..	1,35,414	..	30,900	..	73,536	..	8,496	2,48,346
Kistna ..	Present ..	1,141	1,14,936	1,512	1,02,396	5,161	1,61,376	312	8,544	3,87,252
	Future ..	2,282	2,73,840	1,797	2,15,640	6,451	3,87,060	624	37,440	9,13,980
	Increase ..	..	1,58,904	..	1,13,244	..	2,25,684	..	28,896	5,26,728
Nellore ..	Present ..	588	59,352	934	59,382	2,747	85,866	193	5,904	2,10,504
	Future ..	1,176	1,41,120	1,082	1,29,840	3,434	2,06,040	386	23,160	5,00,160
	Increase ..	..	81,768	..	70,458	..	1,20,174	..	17,256	2,89,656
Cuddapah (portion).	Present ..	651	64,692	1,075	68,034	2,776	91,698	242	7,404	2,31,828
	Future ..	1,302	1,56,240	1,238	1,48,560	3,470	2,08,200	484	29,040	5,42,040
	Increase ..	..	91,548	..	80,526	..	1,16,502	..	21,636	3,10,212
Kurnool ..	Present ..	727	71,352	862	66,720	4,669	2,25,444	252	5,874	3,69,390
	Future ..	1,454	1,74,480	1,077	1,29,240	5,836	3,49,800	504	30,240	6,83,760
	Increase ..	..	1,03,128	..	62,520	..	1,24,356	..	24,366	3,14,370
Chingleput ..	Present ..	854	48,264	1,369	45,996	2,959	49.848	14	432	1,44,540
	Future ..	1,708	2,04,960	1,697	2,03,640	3,699	2,21,940	28	1,680	6,32,220
	Increase ..	..	1,56,696	..	1,57,644	..	1,72,092	..	1,248	4,87,680
South Arcot (portion).	Present ..	223	21,564	382	22,236	1,043	26,292	32	912	71,004
	Future ..	446	53,520	466	55,920	1,304	78,240	64	3,840	1,91,520
	Increase ..	..	31,956	..	33,684	..	51,948	..	2,928	1,20,516
Trichinopoly ..	Present ..	810	68,604	868	36,498	1,826	65,736	..	..	1,70,838
	Future ..	1,620	1,94,400	1,085	1,30,200	2,283	1,36,980	..	..	4,61,580
	Increase ..	..	1,25,796	..	93,702	..	71,244	..	..	2,90,742
Tinnevelly ..	Present ..	727	71,016	1,014	59,004	3,027	1,02,696	170	6,120	2,38,836
	Future ..	1,454	1,74,480	1,227	1,47,240	3,784	2,27,040	340	20,400	5,69,160
	Increase ..	..	1,03,464	..	88,236	..	1,24,344	..	14,280	3,80,324
Salem ..	Present ..	864	70,404	2,168	75,540	4,618	80,544	..	..	2,26,488
	Future ..	1,728	2,07,360	2,670	3,20,400	5,773	3,46,380	..	..	8,74,140
	Increase ..	..	1,36,956	..	2,44,860	..	2,65,836	..	..	6,47,652
	Total Increase ..	..	..	..	..	..	..	..	..	35,66,226

B.—STATEMENT showing the Contributions payable by Government for the Village Service.

Districts.	Total Assessment of the Ryotwari Holdings.	Rate of Village Service Cess now levied in the District.	Amount payable by Government at the rate in the preceding Column.	Value of Inams resumed payable by Government.	Total of Columns 4 and 5, *i.e.*, the amount payable by Government.	Contributions now made by Government which will cease.	Contributions now made by Government in lieu of Ryot's dues included in the Assessment which will continue to be paid.
1	2	3	4	5	6	7	8
	RS. A. P.	RS A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Godávari	27,29,763 0 0	0 0 8	1,13,740 0 0	None.	1,13,740 0 0	..	..
Kistna	36,94,039 0 0	0 1 0	2,30,877 0 0	7,859 0 0	2,38,736 0 0	38,059 0 0	34,123 0 0
Nellore	19,89,213 0 0	0 0 11	1,13,965 0 0	None.	1,13,965 0 0	6,940 0 0	..
Cuddapah (principal division).	11,45,970 0 0	0 1 0	71,623 0 0	Do.	71,623 0 0	573 0 0	..
Kurnool	11,04,116 0 0	0 0 10	57,506 0 0	Do.	57,506 0 0	None.	31,541 0 0
Chingleput ..	15,72,855 0 0	0 1 0	98,303 0 0	Do.	98,303 0 0	13,300 0 0	..
South Arcot (Chidambaram taluk). ..	7,06,061 0 0	*0 1 0	44,129 0 0	31,634 0 0	75,763 0 0	31,634 0 0	..
Trichinopoly ..	14,86,778 0 0	0 1 0	92,924 0 0	None.	92,924 0 0	64,395 0 0	..
Tinnevelly ..	26,59,744 0 0	0 1 0	1,66,234 0 0	27,375 0 0	1,93,609 0 0	63,638 0 0	..
Salem	15,51,957 0 0	0 1 0	96,997 0 0	97,285 0 0	1,94,282 0 0	1,10,000 0 0	..
Total ..	..	..	10,86,298 0 0	1,64,153 0 0	12,50,451 0 0	3,28,539 0 0	65,664 0 0

* The Village Service Act has not been introduced in this taluk, but the rate of 1 anna has been proposed.

C.—STATEMENT showing the Assets and Charges of the Village Service Fund.

Districts.	Assets.	Charges.
	RS.	RS.
Godávari	3,08,654	2,59,854
Kistna	3,99,545	3,87,252
Nellore	2,19,402	2,10,504
Cuddapah (seven taluks)	2,35,744	2,31,828
Kurnool	3,60,771	3,69,390
Chingleput	1,62,100	1,44,540
South Arcot (one taluk)	74,086	71,004
Trichinopoly	1,84,708	1,70,838
Tinnevelly	2,44,839	2,38,836
Salem	2,42,836	2,26,488

D.—STATEMENT showing the Number of Village Servants and their Salaries.

Districts.	CURNAMS																		
	Paid at																		Total.
	Rs. 20.	Rs. 19.	Rs. 18.	Rs. 17.	Rs. 16.	Rs. 15.	Rs. 14.	Rs. 13.	Rs. 12.	Rs. 11.	Rs. 10.	Rs. 9.	Rs. 8.	Rs. 7.	Rs. 6.	Rs. 5.	Rs. 4.	Rs. 3.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Godávari								Details not known.											
2. Kistna	24	20	19	34	..	51	..	60	..	60	61	52	136	77	153	394	..	..	1,141
3. Nellore	17	..	4	..	9	5	14	8	19	88	45	96	..	55	..	228	..	..	588
4. Cuddapah	..	..	22	..	10	14	12	17	22	101	25	40	50	48	65	225	..	..	651
5. Kurnool								Details not known.											
6. Chingleput	..	..	..	..	..	..	5	3	4	4	8	17	19	29	74	268	180	243	854
7. South Arcot	..	..	..	..	..	..	..	13	8	10	12	45	30	37	58	10	..	..	223
8. Trichinopoly	..	..	..	..	..	..	..	..	..	..	..	35	168	416	191	..	..	..	810
9. Tinnevelly								Details not known.											
10. Salem	..	..	..	..	..	..	..	..	..	..	144	75	114	150	109	104	112	56	864

Districts.	MUNSIFS																						
	Paid at																						Total.
	Rs. 20.	Rs. 19.	Rs. 18.	Rs. 17.	Rs. 16.	Rs. 15.	Rs. 14.	Rs. 13.	Rs. 12.	Rs. 11½.	Rs. 11.	Rs. 10.	Rs. 9.	Rs. 8.	Rs. 7.	Rs. 6.	Rs. 5½.	Rs. 5.	Rs. 4.	Rs. 3½.	Rs. 3.	Rs. 2.	
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
1. Godávari										Details not known.													
2. Kistna	..	..	..	..	..	..	..	..	44	..	..	19	85	60	60	249	..	148	156	..	320	..	1,141
3. Nellore	..	..	..	..	..	..	..	..	21	..	9	19	8	21	..	88	43	149	237	..	..	..	595
4. Cuddapah	..	..	..	..	..	..	..	..	14	8	10	26	17	22	..	101	25	203	225	..	..	..	651
5. Kurnool										Details not known.													
6. Chingleput	..	..	..	..	..	..	..	..	..	..	..	..	4	4	4	10	..	49	109	..	252	880	1,312
7. South Arcot	..	..	..	..	..	..	..	..	..	..	..	..	12	20	25	20	..	58	202	..	..	..	337
8. Trichinopoly	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	867	..	..	868
9. Tinnevelly										Details not known.													
10. Salem	..	..	..	..	..	..	..	..	..	..	..	..	..	..	135	62	..	119	53	..	169	1,472	2,010

RECEIVED

In No. 28/85

922

N. A.
PENSIONERS.
211.

ADJUTANT GENERAL'S OFFICE,
OOTACAMUND, 30th *January*, 1885.

From

BRIGR.-GENERAL GODFREY CLERK,
Adjutant-General.

To

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SIR,

In continuation of the letter $\frac{\text{D. O.}}{43}$, dated 15th October last from the Military Secretary to the Commander-in-Chief, I am directed by His Excellency to forward to you the enclosed copy of instructions issued to Officers Commanding Regiments on the subject of obtaining, when possible, employment for pensioned soldiers of the Madras Army.

2. It has been thought that it will be more convenient and save delay if, instead of communicating with the Military Secretary in the event of your being able to find work for a Pensioner, you would ask one of the Officers named in the enclosed list to recommend a pensioner to you.

3. I would specially bring to your notice that, irrespective of the careful estimate of the character of men seeking employment ordered to be made by Commanding Officers, employers of pensioners have a further guarantee of good behaviour and honesty in the fact that any pensioner who may be convicted of theft, or any other felonious or disgraceful act is liable, on being reported to the Superintendent of Pensions, to forfeiture of pension in addition to such other punishment as the law may award.

I have the honor to be,
Sir,
Your most obedient Servant,
GODFREY CLERK, BRIGR.-GENL.,
Adjutant-General.

List of Officers in charge of Pensioners in the Madras Presidency.

STATIONS.	ADDRESS.	REMARKS.
Arcot	Lieut.-Colonel J. Kelly, Unattached.	
Arnee	Do. do. do.	
Aurangabad	Officer in charge of Pensioners.	
Anuntapore	Deputy Collector of Anuntapore.	
Akola	Commissioner of Akola.	
Bangalore	Lieut.-Colonel J. M. Smith, S. C.	
Bellary	Officer in charge of Pensioners.	
Berhampore	Do. do. do.	
Calicut	Deputy Collector of Malabar.	
Cannanore	Do. of do.	
Chicacole...	Bt. Colonel J. C. Hay, S. C.	
Chingleput	Deputy Collector of Chingleput Dist.	
Chittoor	Captain R. Mayne, E. V.	
Cochin	Deputy Collector of Malabar.	
Coimbatore	Do. of Coimbatore.	
Combaconum	Do. of Tanjore.	
Condapily	Major Haleman, S. C.	
Cuddalore	Deputy Collector of South Arcot.	
Cuddapah	Do. of Cuddapah.	
Cumbum	Sheristadar of Cumbum.	
Cuttack	Officer in charge of Pensioners.	
Dindigul	Deputy Collector of Madura.	
Ellore	Lieut.-Colonel C. L. Raikes, S. C.	
Elichpur	Officer in charge of Pensioners.	
Guntoor	Major Haleman, S. C.	
Hingoli	Officer in charge of Pensioners.	
Hoshangabad	Do. do. do.	
Jalna	Do. do. do.	
Jubbulpore	Do. do. do.	
Kamptee	Major S. L. Hunt, S. C.	
Kurnool	Deputy Collector of Kurnool.	
Madras	Major (Lt.-Col.) C. C. Morris, Cav.	
Madura	Deputy Collector of Madura.	
Mangalore	Do. of South Canara.	
Manantoddy	Do. of Malabar.	
Masulipatam	Major Haleman, S. C.	
Mercara	Bt. Colonel R. C. Budd, S. C.	
Moulmein	Officer in charge of Pensioners.	
Mount	Lieut.-Colonel G. H. Oakes, S. C.	
Mominabad	Officer in charge of Pensioners.	
Negapatam	Deputy Collector of Tanjore.	
Neilgherries	Do. of Nilgiris.	
Nellore	Do. of Nellore.	
Ongole	Do. do.	

STATIONS.	ADDRESS.	REMARKS.
Palamcottah	Deputy Collector of Tinnevelly.	
Palaveram	Lieut.-Colonel G. H. Oakes, S. C.	
Palcondah	Deputy Tahsildar of Palcondah.	
Paulghaut	Deputy Collector of Malabar.	
Poonamallee	Do. of Chingleput Dist.	
Port Blair	Officer in charge of Pensioners.	
Quilon	Do. do. do.	
Ryepore	Do. do. do.	
Rajahmundry	Lieut.-Colonel C. L. Raikes, S. C.	
Ramnad	Deputy Collector of Madura.	
Rangoon	Officer in charge of Pensioners.	
Royacottah	Deputy Collector of Salem.	
Salem	Do. do.	
Sambalpore	Officer in charge of Pensioners.	
Samulcottah	Lieut.-Colonel C. L. Raikes, S. C.	
Saugor	Officer in charge of Pensioners.	
Seetabuldee	Major S. L. Hunt, S. C.	
Secunderabad	Bt. Colonel A. G. D. Logan, S. C.	
Tanjore	Deputy Collector of Tanjore.	
Tellicherry	Do. of Malabar.	
Thayetmyo	Officer in charge of Pensioners.	
Tongoo	Do. do. do.	
Trevandrum	Lieut.-Col. W. D. B. Ketchen, Cav.	
Trichinopoly	Lieut.-Colonel A. M. Lys, S. C.	
Trichoor	Officer in charge of Pensioners.	
Tripassore	Deputy Collector of Chingleput Dist.	
Vellore	Captain R. Mayne, E. V.	
Vizagapatam Vizianagrum	Lt.-Col. W. R. Sheffield, S. C.	
Bellary District	Deputy Collector, Bellary.	
Ganjam District	Do. Ganjam.	
Godavery District	Do. Godavery.	
Kistna District	Do. Kistna.	
Trichinopoly District	Do. Trichinopoly.	
Vizagapatam District	Do. Vizagapatam.	
DIVISIONS IN MYSORE.		
Ashtogram Division Mysore District	Assistant Commissioner.	
French Rocks	Do.	
Hassan Sub-Division	Do.	
Nugger Division.		
Kadur District	Do.	
Shimoga District	Do.	
Nundidroog Division.		
Bangalore District	Do.	
Kolar District	Do.	
Tumkur District	Do.	

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Register of Men who on discharge from the Regiment are desirous and are specially recommended by [illegible]nding Officer to have their names registered for employment as Peons, Watchmen, Gatekeepers, &c., &c.

Pension No. (To be filled in by Officer in charge of Pensioners.)	Rank and Name.	Former Corps and Regimental No.	Caste.	Age on 1st January 188		Length of Service on 1st January 188 .		Date of Discharge.	Extract from Proceedings of Medical Committee, *i. e.*, "Remarks of the Medical Committee."	Personal appearance and particular marks.	Educational Qualifications.					Character and conduct during Service.	What particular situation the man would be willing to accept, the one preferred being stated first.	Where he wishes to be employed.	Commanding Officer's recommendation.	Circle of Pension Paymaster in which the applicant receives his pension.	REMARKS.
				Years.	Months.	Years.	Months.				Arithmetic.	Languages.	Whether he understands English.	Whether in possession of Certificates of Education, if so, what Class.	General intelligence apart from Education.						

To be substituted for letter No. $\frac{D.O}{37}$, dated 2nd August 1884, from the Military Secretary to His Excellency the Commander-in-Chief.

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N. A.
PENSIONERS.
210

ADJUTANT GENERAL'S OFFICE,
OOTACAMUND, 30*th January* 1885.

From

BRIGADIER GENERAL GODFREY CLERK,
Adjutant General.

To

THE ______________________

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SIR,

I am desired by His Excellency the Commander-in-Chief to submit to you the following proposals for bettering the condition of deserving Native Soldiers, who may be discharged from the service with gratuity or pension whilst they are still young and active enough to do something to earn their livelihood in a civil capacity.

2. Amongst native employés of all grades, there obtains, in this Presidency, a regular system by which appointments are jealously guarded from open competition and are handed down from father to son, from elder to younger brother, or from uncle to nephew. This is natural enough, but it is at least probable that employers may often suffer from the desire of their subordinates to keep everything in the family. It is in consequence of this system that discharged soldiers, whose connections and influence have, as a rule, entirely concentrated themselves in the Army, find it most difficult to make a start or get any sort of opening in civil life,—for certain departments of which they are nevertheless peculiarly well qualified by their military training and antecedents.

3. For instance, it seems to His Excellency that the habits of obedience, cleanliness and punctuality which are acquired during a soldier's career, would find a most fitting application in such appointments as those of peon to public offices or mercantile firms, of gate-keeper along lines of Railway, of postal or telegraph messenger, or any similar employments, which demand reliable and steady men.

4. With a view of assisting discharged soldiers of good character to obtain employment the Commander-in-Chief directs the adoption of the following system:—

I. When men are sent before a Medical Invaliding Committee, in addition to the remarks at present required by regulation the Committee should enter in the column "Remarks of the

Medical Committee," against the name of each man, their opinion as to whether the man is physically fit to perform the duties of a peon, gatekeeper, watchman, jail guard or warder, police reserve, telegraph or postal delivery peon, or any similar employment.

II. In the case of men passing voluntarily to pension after 32 years' service the Officer Commanding will himself make the entry.

III. The proceedings of the Medical Committee will be sent to the Officer Commanding by the Staff Officer of the Adjutant General's Department in view to the Officer Commanding entering the "Remarks of the Medical Committee" referred to in (i) in the register, form A attached.

IV. The Officer Commanding will then enter in the register, form A attached the names of all men wishing for employment; this register to be prepared in duplicate, by stations at which men desire employment; the names of such men as are willing to accept work anywhere will be entered in a separate register; the names of those willing to accept work at one or more stations to be entered in the register for each such station.

V. One copy of the register will be sent to the Superintendent of Pensions;

One to the Officer charged with the payment of pensioners in the district in which the pensioner intends to reside.

VI. The last named Officer will send to the Superintendent of Pensioners monthly, immediately after the disbursement of pensions.

(*a*) A roll showing casualties amongst the men registered.

(*b*) A roll of men that have obtained employment.

VII. The Heads of Government Departments, of Mercantile Firms, etc., etc., will be communicated with in the first instance by the Adjutant-General and invited to apply to the officers named in Clause V for the services of pensioners.

VIII. If applicants for the services of pensioners are residing at, or near, the same place as the man selected by the officer named in Clause V, the man will be sent to the applicant for approval with an extract from the register giving all particulars regarding the man. In other cases a similar extract will be sent by post.

IX. Every pensioner entered in the register will be furnished before he leaves his Regiment with a full extract therefrom as far as concerns himself in view to his trying to obtain employment for himself; he should be instructed to report to the officer paying him when he succeeds in obtaining a situation in view to the fact being noted in the register, and he should be required to deliver up extract therefrom received before leaving his Regiment.

X. The name of a man who has once found employment will not again be entered in the register unless he produces a certificate of good conduct while in his former situation.

XI. The officer referred to in Clause V will not fail to report to the Superintendent of Pensions the case of any pensioner who while in a situation may be convicted of theft, or any other felonious or disgraceful act and who has thus become liable to forfeiture of pension in addition to such other punishment as the law may award.

5. Any subsidiary instructions that may be found necessary for the satisfactory working of the scheme will be issued to all concerned by the Superintendent of Pensions with the approval of the Commander-in-Chief to be obtained through the Adjutant General.

6. The ultimate success or failure of the whole scheme will depend on the character of the men who are supplied to employers. It is therefore most important that Commanding Officers should be careful not to send in the name of any man on whom they cannot thoroughly depend. On no account should a willingness to accept employment be considered sufficient ground for submitting a man's name. The fact that a man has but few entries in his Defaulter Sheet is not of itself sufficient to warrant his name being entered in the register; the Commanding Officer before permitting a man's name to be placed thereon must by careful and personal enquiry from the candidates Wing Commander, and the Native Officers of his Company, *thoroughly* satisfy himself that the man is steady, sober, trustworthy and intelligent.

A *strict* observance of these instructions is *essential* to the success and permanency of this scheme.

7. The instructions given in para. 4 of this letter will be at once carried out in the case of those men whose names were included in the rolls referred to in para. 8 of D. O. letter, No. 37, dtated 2nd August 1884 from the Military Secretary to H. E. the Commander-in-Chief.

8. In conclusion I am desired by the Commander-in-Chief to inform you that His Excellency hopes much benefit may accrue to the Madras Native Army from this project. Nothing is more calculated to encourage men to enter on a career, than the thought that they will not be forgotten as soon as they cease to be worth their pay. His Excellency therefore trusts you will give your cordial support to the scheme.

I have the honor to be,
Sir,
Your most obedient Servant,
GODFREY CLERK, BRIGR.-GENL.,
Adjutant General.

LAWRENCE ASYLUM PRESS.

No. 731

Communicated to the
Deputy Director of Rev. Settt.
o III Party.

(By order)

First assistant

Dept of Rev: Settt.
& Agriculture.
Madras 9th March 1815

To

The Dy. Director of
Rev: Settt.
Party No III

6

RECEIVED
13 APR 85

23rd March 1885, No. 351, Revenue.

228

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following letter from Colonel H. T. ROGERS, R.E., Superintendent, Madras Survey, to the Secretary to Government, Revenue Department, dated Ootacamund, 26th September 1884, No. 207-G.:—

In accordance with the instructions conveyed in G.O., No. 922, of the 7th August 1884, I have the honor to submit the proposition statement and the information called for in reference to the reorganization of the establishment of the Survey Department.

2. Since the Government in the above order consider that there is not sufficient ground for any increase of pay for civilians in the rank of 2nd-grade Deputy Superintendent or 1st Assistant Superintendent, I have entered their former salary in the proposition statement; but I propose that the pay of the Royal Engineer officers should be that sanctioned in G.O., No. 1749, dated 31st October 1878, for military officers who entered the department before 1st November 1872, *plus* pay proper, viz., Deputy Superintendent, 1st grade, Rs. 1,400, *plus* pay proper; Deputy Superintendent, 2nd grade, Rs. 1,200, *plus* pay proper; Assistant Superintendent, 1st grade, Rs. 900, *plus* pay proper; Assistant Superintendent, 2nd grade, Rs. 600, *plus* pay proper, because I find that less pay will certainly fail to secure their services. It must be recollected that the prospects of Royal Engineer officers in many departments, notably the Survey of India and the Public Works, are far better than any that this department can offer, and that an equivalent must be given to induce them to sacrifice those prospects.

3. I have made a slight alteration in the nomenclature of the establishment in order to distinguish more clearly the upper from the lower subordinate establishment. All computers and draftsmen drawing less than Rs. 50, and consequently included in the lower subordinate establishment, I have designated as assistant computers and assistant draftsmen.

4. *Forecast for next five years.*—Statement A exhibits a detailed forecast of the work that will probably be performed during the next five years by an establishment costing eight lakhs under all heads of charge and consisting of five parties and the Central office. It will be noticed that the annual outturn of topo-survey (from about 2,000 to 3,000 square miles) falls short of Colonel Scott's estimate. The reasons for this are—

(a) That No. I party, instead of being maintained solely for topo-work, is now also employed on revenue survey.

(b) The rate determined by Colonel Scott for this class of work, viz., Rs. 25 per square mile, is far too low. At the time Colonel Scott framed his estimate, no returns existed from which the cost of a topo-survey based on triangulation could be derived. His rate was obtained from the cost of surveys of detached hills and outlying waste for which Lambton's survey, the Madras coast series and the surrounding revenue survey stations formed a good frame-work. It has been found from experience gained in the surveys in Godávari, the 'Anaimalais and Palnis, where a trigonometrical survey has preceded topographical survey, and where the surveyors are allowed extra allowances on account of the unhealthiness and inaccessibility of the tracts to be operated on, that the rate for topo-survey ranges from Rs. 75 to Rs. 100 per square mile. As the greater portion of the remaining topo-work of the presidency is of this more expensive character, it is apparent that the outturn expected by Colonel Scott cannot be attained without the risk of diminished outturn under revenue survey.

5. In regard to the estimated outturn under revenue survey, it will be seen from Appendix A that about 1,600 square miles may be looked for annually, but this area may be something more or less, as it is not yet known what the rate per square mile for revenue survey will be in Malabar.

6. *The amount of topo-survey which remains to be done before the complete maps of districts still in hand can be issued.*—On the 1st April 1884 the amount of topo-survey remaining to be executed in districts in which the revenue survey has been already commenced was about 21,000 square miles; about 13,000 square miles of this will be mapped on the 1st April 1889, there will then be an area of about 9,000 square miles to deal with. It will probably be found expedient, on the completion of the revenue survey in Vizagapatam, to allow No. I party to revert to purely topographical work, in which case the 9,000 square miles will be brought to book in five years; in other words, the topo-survey of the districts in which revenue survey has been commenced will be completed on 1st April 1894, and the district sheets may be expected on 1st April 1895.

7. The incompleted district maps in the Central office are Godávari, Kistna, Tinnevelly, Cuddapah, Salem and Nílgiris. The whole of the topo-survey in Cuddapah, Salem and Nílgiri districts has been completed, and the topo-work in Godávari and Kistna will probably be finished in 1886-87 and the maps ready in 1887-88. In Tinnevelly 582 square miles only of topographical work remains outstanding; this could be mapped, if necessary, in one season.

8. *Reduction of incomplete work to a minimum.*—The question regarding the reduction of incomplete work to a minimum has received my careful consideration, and I have come to the conclusion that no unnecessary license has been allowed, nor can any reduction be made in this direction. Government are perhaps not aware that a village survey consists of eleven distinct processes, and that these processes are again subdivided. In order to ensure a regular flow of work and to prosecute it economically, it is evident that in every process and sub-process there must be incomplete work.

9. *Arrears of mapping in Central office.*—This is a serious question, inasmuch as various Government departments and the public are deprived of the advantages that might reasonably be expected from a survey upon which a heavy expenditure has been incurred for many years. The village or 16″ revenue maps are not in arrears, *i.e.*, there is about six months' work in hand to provide for a continuous supply of work to the Photographic and Printing Departments. But with reference to Board's Proceedings of the 21st March 1882, No. 849, 753 square miles of congregated village maps have to be relithographed as separate villages. This work will be finished by the 1st September 1885.

10. Appendix B shows the number of taluk and district maps that have to be published and republished. It will be seen (*a*) that material for compiling thirteen taluk maps is available; (*b*) that sixteen maps have to be republished for reasons entered in remark column of statement; (*c*) that thirty-five maps have to be republished, as the stock in hand is exhausted or nearly so.

For maps of district (*a*) data for thirty-three sheets exist; (*b*) eight sheets have to be republished for reasons entered in statement; (*c*) eighteen sheets have to be republished on account of the supply having run out.

11. The above work will employ the Central office establishment for four years (*vide* statement A).

12. *Temporary establishment.*—In paragraph 7 of the Government order, Government consider that the temporary establishment has been too large of late years, and restrict me to entertaining lower subordinates only, and desire me to fix the amount to

be expended annually on such establishment in each party. I have to observe that by the introduction of the new scheme many of the temporary hands will become permanent, and it will probably be found advantageous to reduce the temporary establishment that was raised to push on the survey of Tanjore for the Public Works Department. After duly considering the temporary establishment of parties and Central office as they now stand, I am of opinion that Rs. 18,000 annually for each party and for Central office should be allowed for temporary establishment, or Rupees 1,08,000 for the whole establishment. I do not purpose to restrict any party or the Central office to the expenditure of the fixed sum of Rs. 18,000 annually. The lump sum for temporary establishment will be allotted according to the requirements of parties, and will be spent as advantageously as possible to the department and therefore to Government.

13. *Appointing men on less than sanctioned rates of pay.*—In regard to appointing men on less than the sanctioned rates of pay, I have to state that whenever a man may be duly qualified to perform the duties of the appointment he is posted to, I am of opinion that he should draw the pay of the appointment to which he is promoted or posted. But until his fitness has been ascertained, he should be on probation on any salary the officer in whose gift the appointment lies deems sufficient. The system formerly so much in vogue in the department of giving men as a rule less than the sanctioned rates of pay for the office they held is unfair and impolitic.

14. *Probationers.*—Provision has been made for four probationers.

15. To summarize—

(1.) 8,345 square miles of revenue survey and 12,838 square miles of topo-survey will be completed during the next five years. The amount of topographical survey remaining to be executed in districts in which the revenue survey has already been commenced is about 21,000 square miles.

(2.) The amount of incompleted work cannot be reduced, as no unnecessary license has been allowed.

(3.) The arrears of work in the taluk and district maps will employ the Central office establishment for four years.

(4.) A grant of Rs. 1,08,000 annually is required for temporary establishment for Central office and parties.

(5.) Qualified men should be given full sanctioned pay when appointed or promoted, but men not qualified should be on probation on such pay as the officer appointing them thinks fit until qualified.

(6.) Provision has been made for two Royal Engineer officers—one as First Assistant Superintendent and the other as Second Assistant Superintendent—on the same pay as that hitherto drawn by military officers in those grades, and also for four probationers.

READ—also endorsement from the Accountant-General, dated 12th November 1884, No. I.B.E.-191, forwarding the following statement showing the expenditure of the Survey Department for five years from 1879-80 to 1883-84:—

Heads.	1879-80.			1880-81.			1881-82.			1882-83.			1883-84.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
REVENUE SURVEYS.															
Controlling Staff.															
Superintendent of Revenue Surveys ..	24,820	5	4	20,971	9	10	16,899	5	6	20,750	0	0	21,000	0	0
Clerk, draftsmen and Native surveyors ..	37,758	8	3	49,881	15	2	53,910	14	8	65,241	3	2	68,599	6	0
Cost of instruments, &c.	..			..			..			2,259	12	8	..		
Cost of European stores	1,843	5	3	50	9	1	13	5	4	479	14	3	2,205	0	2
Office rent	..			..			..			177	10	2	..		
Service telegrams	62	0	0	27	0	0	98	4	0	97	4	0	136	0	0
Miscellaneous	9,852	8	3	9,431	8	3	10,026	11	7	5,240	10	10	6,747	12	11
Travelling allowances	2,649	2	4	1,616	0	1	4,563	1	8	4,094	12	7	2,938	0	6
Service postage	511	15	0	356	7	0	365	11	0	432	10	6	374	0	0

Statement showing the expenditure of the Survey Department for five years from 1879-80 to 1883-84—(*Continued*).

Heads.	1879-80.			1880-81.			1881-82.			1882-83.			1883-84.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Professional Survey Establishment.															
Deputy and Assistant Superintendents of Survey	1,07,838	7	1	90,392	11	0	1,04,983	10	10	1,05,987	10	11	1,08,924	3	5
Surveyors, assistant and probationary surveyors and sub-surveyors ..	76,634	4	7	1,16,028	6	8	1,15,370	3	2	1,10,993	4	4	1,16,784	11	6
Tindals, measurers, guards and servants.	67,063	2	0	63,979	5	0	55,946	7	6	37,387	12	1	36,401	7	9
Talukdari survey establishment, clerks, draftsmen and Native surveyors ..	1,51,989	2	3	1,32,991	3	11	1,36,325	1	11	1,24,829	15	8	1,26,274	12	3
Medical subordinates	..			..			..			1,686	4	3	1,969	11	2
Temporary establishment	55,811	2	2	38,791	4	0	47,282	13	11	66,741	15	6	1,39,743	4	10
Cost of survey marks	9,848	10	2	9,444	1	2	9,687	13	7	13,287	9	8	89,076	12	6
Purchase of furniture	..			..			156	14	10	760	8	0	287	0	0
Office rent	..			..			..			4,183	13	8	4,543	4	10
Service telegrams	6	0	0	21	0	0	33	0	0	34	14	0	97	14	0
Miscellaneous	12,313	13	5	13,663	0	10	8,213	6	8	17,503	8	7	4,907	7	4
Travelling allowances	26,941	3	1	20,161	15	0	28,237	3	9	36,266	1	9	36,019	1	3
Service postage	1,910	3	6	1,714	4	0	1,753	10	9	2,085	9	0	2,244	3	0
Demarcation Survey Establishment.															
Deputy and Assistant Superintendents of Survey	18,250	11	3	..			..			..			..		
Surveyors, assistant and probationary surveyors and sub-surveyors ..	18,812	14	6	..			..			..			..		
Establishment	34,035	1	9	..			..			..			..		
Cost of boundary pillars	2,383	8	2	..			..			..			..		
Demarcation and measurement allowances	2,209	9	5	..			..			..			..		
Purchase and repairs of furniture ..	23	6	0	..			..			..			..		
Service telegrams	3	0	0	..			..			..			..		
Miscellaneous	478	5	8	..			..			..			..		
Travelling allowances	2,491	11	5	..			..			..			..		
Service postage	161	7	6	..			..			..			..		
Total ..	[illegible]	8	4	5,69,522	5	0	5,93,867	12	8	6,20,522	13	7	7,69,264	1	5

ORDER—dated 23rd March 1885, No. 351, Revenue.

Miscellaneous.

* G.O., 7th August 1884, No. 922.

In the foregoing letter the Superintendent, Revenue Survey, furnishes the explanations and further information called for by Government * in connection with the scheme for the reorganization of the department.

2. The Government will first deal with the forecast of anticipated outturn of work during the five years 1884-85 to 1888-89, which is now submitted by the Superintendent. The forecast is based on the supposition that there will be five parties, costing eight lakhs of rupees a year. It shows that in the four northern districts allotted to No. I party there will remain on 1st April 1889 about three and a half years' work; that the district of Bellary under party No. II will be about two-thirds finished by that time; that party No. III now working in Madura, Tinnevelly and Tanjore will, within the five years, complete the two districts first named, but will have at least three years' work remaining in Tanjore, which accordingly will not be finished before the year 1892; that party No. IV will have completed South Arcot in 1887, will then move in to Anantapur, in which district there will remain on 1st April 1889 six years' work for the party; and that the survey of Malabar at the rate for which, in the total absence of experience, it is considered safe to estimate, will take eighteen or twenty years.

3. These estimates force upon Government the desirability of concentrating operations and, instead of undertaking new work, of making every effort to complete that already in hand with greater expedition. His Excellency the Governor in Council therefore considers that the survey of Malabar except Wynaad, where the Nílgiri detachment now raised to the rank of a party is at work, should be postponed; and that when the Wynaad survey is completed, which it is understood it will be by the

end of 1885-86, No. V party should be transferred to Tanjore, if possible, in addition to No. III or to Bellary-Anantapur. Under this arrangement Tanjore would easily be finished within the five years, and it would then be possible to throw two complete parties into Malabar, who would finish it in a much shorter time. The Superintendent will report on the subject, and the opinions of the Board of Revenue and the Collector of Malabar will also be called for.

4. The outturn of work estimated for five parties is in the five years 8,345 square miles of revenue and 12,838 square miles of topographical survey; but this includes Malabar, where very slow progress is looked for. Excluding Malabar, the outturn for five parties in ordinary districts should be 9,650 square miles revenue and 13,985 topographical; or an average per annum of 1,930 and 2,797 square miles, respectively, for eight lakhs. Colonel Scott's estimate for four parties was 1,200 square miles of revenue survey, 1,000 square miles of forest and 3,000 square miles of topographical survey for Rs. 5,70,000. The outturn contemplated in the present forecast is thus less in proportion to the number of parties; but Colonel Rogers explains that the rate per square mile of topographical survey assumed by Colonel Scott was, in the absence of sufficient data based on experience, much too low. The Government accept the present estimate.

5. The general effect of Colonel Rogers' proposals is exhibited in the annexed statement, the entries under "present scale" being the amounts sanctioned for five parties in 1877:—

—	PRESENT.				PROPOSED.			
	Officers.	Upper subordinates.	Lower subordinates.	Total.	Officers.	Upper subordinates.	Lower subordinates.	Total.
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Superintendent	1,750	..	..	1,750	1,800	..	..	1,800
Central office	1,200	1,650	2,277½	5,127½	1,200	4,015	2,904	8,119
Parties	10,625	9,175	28,250	48,050	11,760	12,100	20,330	44,190
Per mensem ..	13,575	10,825	30,527½	54,927½	14,760	16,115	23,234	54,109
Per annum ..	..	..	..	6,59,130	..	..	..	6,49,308

There is thus an apparent reduction of cost, but this is to be far more than made up by the proposed temporary establishment, which the Superintendent is to have power to entertain up to a limit of Rs. 18,000 per annum for the Central office and for each party. The total charge for establishment will therefore be Rs. 7,57,308 against Rs. 6,59,130 on the present scale. The Central office will cost Rs. 1,16,428 against Rs. 61,530 and the parties Rs. 6,26,280 against Rs. 5,76,600. The chief increase is in upper subordinates (*i.e.*, men drawing Rs. 50 and upwards) and in the Central office.

6. The experience of the department during the last few years, since work of a novel kind has been introduced and a higher standard of excellence especially in regard to the style of the maps turned out has been demanded, demonstrates the necessity of thus strengthening the Central office and improving the upper subordinate staff. The Superintendent's proposals have already, with reference to these considerations, been generally approved in G.O., 7th August 1884, No. 922, and the reasons for the various detailed charges proposed have been fully set out in the memorandum by Colonel Rogers printed with that order. It is unnecessary to discuss these minutely, and His Excellency the Governor in Council need merely record remarks on some of the more salient points.

7. *Superintendent's salary.*—It is proposed to fix this at a consolidated amount to be drawn in all cases of Rs. 1,800. As shown by Colonel Rogers, it has not been found possible, in the case of any officer appointed since the salary was fixed at Rs. 1,500, to restrict the emoluments of the Superintendent to that amount, and the Government are persuaded that the lower amount will always be found insufficient to attract and pay a man of the stamp required. There is no department in which efficient administration tells more in the interest of economy of working, and in which therefore liberal pay to the head of the department is better bestowed. Comparing

also the responsibilities of the head of the Madras Survey Department with those of the superior officers of the Survey of India (*vide* Colonel Scott's letter recorded in G.O., dated 17th September 1877, No. 2707), a salary of Rs. 1,800 per mensem must be admitted to be very moderate. The Government therefore approve this proposal.

8. *Officers' salaries.*—The Government have already stated that they saw no ground for increase in the rates now existing for Uncovenanted Deputy Superintendents, 2nd grade, and Assistant Superintendents, 1st grade; and the increase is now omitted from the proposition statement. But in consequence of this reduction, and in view to providing salaries which will attract officers of the Royal Engineers to the department, Colonel Rogers now proposes that these officers shall draw in addition to the pay proper of their rank the rates of pay now in force for military officers who joined the department prior to 1st November 1872 (G.O., 31st October 1878, No. 1749). The Government do not think the grant of pay proper required, but they approve the rest of the present proposals, and have already applied to the Government of India for sanction to bring the military scale of 1878 into force as regards all military officers of the department, irrespective of the date on which they join. The uncertainty as to the entertainment of such officers makes it impossible to exhibit the exact effect of the proposals in the proposition statement.

9. It is observed that, under present and proposed scales, Colonel Rogers has entered six Deputy Superintendents inclusive of the Deputy Superintendent of the second class, sanctioned as supernumerary (G.O., 7th January 1882, No. 29). The Government are decidedly of opinion that the services of an officer of this grade are absolutely necessary for the supervision of work in the Central office, and that permanent sanction should be obtained accordingly. The Central office as enlarged will be equal to the charge of a full party, and the superintendence of it will always demand special training and technical qualifications of a high character. The office cannot be left in charge of a Civil Assistant during the absence of the Superintendent on tours of inspection, which must be frequent and prolonged.

10. The Superintendent's proposals regarding Civil Assistants in the Central office and Sub-Assistants in the parties commend themselves to Government. The increase in the numbers of the latter class of officers—a very important one—is very necessary, and the enhanced pay will make the posts attractive to men who obtain the B.C.E. degree and have undergone special training in the Civil Engineering College. The minor changes suggested in order to improve the staff of computers, draftsmen, &c., are approved.

11. With regard to the temporary establishment and with reference to the remarks in paragraph 7 of G.O., 7th August 1884, No. 922, the Government are pleased to sanction the proposal to supplement the reductions to be effected in the permanent staff of lower subordinates by temporary hands to the extent stated, subject to the following restrictions:—

(1.) That the designations and rates of pay of temporary servants shall be those laid down for the permanent staff.

(2.) That no officer above the grade of deputy surveyor shall be on a temporary footing.

(3.) That the budget provision shall not be exceeded.

The last condition is essential, inasmuch as it appears doubtful whether, without savings under establishment, sufficient provision can be made for miscellaneous charges (travelling allowances, cost of boundary stones, stores, &c.) out of the balance of the sum of eight lakhs, which is to be the limit of survey expenditure annually. In budgeting, full provision must be made for these charges, and only the balance available should be allotted for temporary establishment, it being understood that savings accruing under permanent establishment may be expended at the Superintendent's discretion on temporary men.

12. The powers exercised by the Superintendent under existing orders of transferring men from party to party to meet the exigencies of the work will continue; but in lieu of reducing sanctioned rates of pay, he will in future promote men on probation as proposed in paragraph 5 of his letter read above.

13. With the above remarks the proposition statement will be transferred to the Financial Department for final orders, and for obtaining the sanction of the Government of India to such portions of the scheme as under the decentralization orders are beyond the competence of the local Government.

(True Extract.)

(Signed) H. E. STOKES,
Secretary to Government.

To the Financial Department, with proposition statement.
,, Superintendent, Revenue Survey.
,, Director of Revenue Settlement and Agriculture.
,, Board of Revenue.
,, Accountant-General.

Exd. J. Henricus.

180 Copies.

Govt. of {1885} Madras

REVENUE.

Issued

Recd. *Encl.*

№ 976

G.O., 23rd March 1885, No. 351.

mmunicated to the Officers in charge of Settlement Parties

ept. of Rev. Sett. & Agre }
adras 7th April 1885 }

(By order)

1st. Assistant

MARCH.

To

The Deputy Director
No III Party

Survey Department.

Passing orders on the subject of the reorganization of the —, and transferring the proposition statement to the Financial Department for final orders and for sanction of the Government of India.

RECEIVED
13 APR 85
Ccl

Ref. No. 9

26th March 1885, No. 375, Revenue.

992-

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following paper :—

Note on Persian Carpets taken from "The Land of the Lion and Sun," by G. J. WILLS, M.D., published 1883 (pages 149 to 152).

The finer and more valuable carpets were not new—in fact, few really good carpets are made now-a-days. At the time I am speaking of (sixteen years ago), the magenta aniline dyes were unknown to the carpet-makers of Persia, and all the colors except the greens were fast. Now-a-days the exact reverse is the case. A very brilliant carpet is produced, and if a wet handkerchief is rubbed on it, *the colors come off*. These are not fast, and the carpet is worthless.

The aniline dyes are particularly used in the Meshed carpets, and as these are the showiest and most attractive, they are largely exported. Of course a native will not look at them, for when he buys a carpet he expects it to last *at least* a century. He is generally not disappointed. One sees many carpets which are quite fifty years old with hardly a sign of wear.

At the time of which I am speaking, carpets had very seldom been exported from Persia, and consequently there was no rubbish manufactured. Now (1883) it is quite different ; if a very good carpet is wanted, an old one must be bought.

The carpets made for the European market are coarse and the weaving loose. Many, indeed, are made of fast colors ; but gaudy patterns only are used, and the fine and original patterns formerly in vogue are disappearing. Of a couple of hundred carpets brought for sale, perhaps there may be only six distinct patterns, though of course the borders and arrangement of the colors may vary. The favorite patterns are the "Gul Anar" and "Herati." The latter is certainly very effective, and is the pattern of nine-tenths of the carpets exported.

To choose a carpet, the first thing is to see if the colors are fast. This is done by rubbing with a wet cloth. If the slightest tinge is communicated to this, the carpet should be rejected. Then if the carpet is limp, and can be doubled on itself like a cloth, it is "shulberf" (loosely woven) and scamped. A carpet which is well woven (I am speaking of new ones) is always stiff. Greens in the pattern should be avoided, as they will fade to a drab ; but this drab is not unpleasing. White, on the contrary, in time becomes a pale yellow, and is a good wearing color, and should be chosen rather than avoided.

The thinner and finer the carpet is the greater is its value. The size of the thread of the wool should be noticed, and the smaller it is the better. It should be remembered that, in the question of price, a thinner thread means a great difference in the amount of labor in making.

The size, too, of the pattern should be noted as a large pattern is proportionately much cheaper. Again, the finer patterns being only undertaken by the best weavers, one is more likely to get a good carpet with a fine pattern than with a coarse. The general effect, too, should be noted. This is never bad, but at times an eccentric pattern is come across.

The softer the carpet is to the hand the more valuable it is, as a rule, if it be not a Meshed carpet with aniline dye. These latter should be avoided, as they always fade and are of very small value.

One of the reasons why Oriental carpets last so long is that chairs are not used, and they are not walked on by boots, and so dirtied and worn, but by *bare* feet. The carpet should now be doubled and the ends applied to each other. If one is broader than the other it shows careless work, and the carpet should be rejected as "kaj" (uneven), or rather crooked.

It must be then spread on a level floor and smoothed to see if it lies flat. Many carpets have "shatúr," or creases; these never come out. The carpet never lies flat, and wears in a patch over the "shatúr."

If all is yet satisfactory, the carpet must be turned bottom upwards and the *edges* carefully examined. If any darns are seen in the edges of the carpet it must be rejected, for the Persians have a plan of taking out any creases by either stretching the edges, which often break under the process, or, if there is a redundancy, *cutting* it out and fine-drawing it so skilfully that it is only detected on *carefully* examining the back. Such carpets are worthless.

The top of the carpet should now be inspected. If the edging of cotton at the top or bottom be blue with no white in it the carpet is rubbish, and merely a thing got up for sale—absolutely a sham. The edge or finish should be either white cotton or black wool. The latter is by far the best, but is seldom seen now-a-days. The *all* woollen carpets are mostly made near Múrghab, and by the wandering tribes of Fars; they are very seldom exported, and are always of sad patterns, often very irregular.

In making a carpet, the women who weave it will often run out of the *exact* shade of wool used in some part of the pattern or even ground-work; they will continue with *another shade* of the same color. This has a curious effect to the European eye, but the native does not look on it as a defect.

The value *in Persia* of a carpet in the present day may, *if perfect* (either new or old), be reckoned at from fifteen shillings to two pounds a square yard. In the larger carpets nothing can be obtained under a pound a square yard.

Of course there *are* a few carpets which have been made to order for great personages which are worth more than the price I have given, but these are not easily obtained and only at *prix fou.* By the term *carpet* I mean what Persians call kali, that is, in contradistinction to farsch. Kali is our idea of carpet, that is, a floor-covering *having a pile.*

Farsch means floor-covering generally, and may be "nammad," or felt, or "gelim," a thin, pileless floor-covering of coarse pattern, and much used in Europe as a *portière.* In these "gelim" white greatly predominates, and they soon get soiled and dirty. They are only used in Persia by the villagers and poor.

The farsch Hamam-i, or bath carpet, is a finer species of "gelim" made near Kermanshah. Both sides are alike, the patterns are elaborate and beautiful, and the colors very lovely; *but they fade,* being mostly of aniline dye, and are harsh to the feel. Their only recommendation is their extreme portability.

The "nammad" or felt (carpets) are generally used by Persians to go round the room and act as a frame to the carpet (kali) which occupies the top and centre.

They are three in number for each room; two kanáreh, or side-pieces, a yard to a yard and a half wide, and a sir-andáz, literally that which is thrown over the head (of the apartment). The kanáreh are from half to two and a half inches in thickness, and are usually of a light-brown or yellow-ochre color, being ornamented with a slight pattern of blue and white, or red and green, which is formed by pinches of the wool inserted when the felt is made.

The best "nammad" are made at Yezd, and are often expensive. They cost about thirty shillings a square yard, and will last a century. They are two inches thick.

Nammad, however, are now getting out of fashion, for they will not stand the wear produced by chairs which are coming into common use among the rich. Carpets are taking their place.

Circular No. 22 Ex.—25-11.

Copy forwarded to the Government of Madras for information.

(By Order.)

Rev. & Agri. Dept.
(Museums & Exhibitions),
Calcutta, 11*th March* 1885.

(Signed) C. S. BAYLEY,
Offg. Under-Secy. to the Govt. of India.

ORDER—dated 26th March 1885, No. 375, Revenue.

Miscellaneous.

Communicated to the Board of Revenue and the Director of Revenue Settlement and Agriculture.

(True Extract.)

(Signed) H. E. STOKES,
Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.

Exd. W. H. French.

80 Copies.

Govt. of (1885) Madra

REVENUE.

Issued

Recd. Encl.

G.O., 26th March 1885, No. 375.

MARCH.

Persian Carpets.

Copy of a note on — by G. J. Wills, M.D., communicated to the Board of Revenue and the Director of Revenue Settlement.

No 570

unicated to the Officers in charge of Settlement Parties, to
gricultural Reporter and to the Inspector of Cattle diseases

of Rev. Sett. & Agre
s 7th April 1885

(By order)

1st. Assistant

he Deputy Director
No III Party
~~with~~

RECEIVED
20 APR 85

Regd No 1070

26th March 1885, No. 373, Revenue.

234

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Proceedings of the Board of Revenue, dated 6th February 1885, No. 404 :—

Read—the following letter from J. F. PRICE, Esq., Collector of Chingleput, to the Secretary to the Board of Revenue, dated Saidápet, 29th December 1884, No. 1 :—

Adverting to paragraph 2 of the Proceedings of the Board of Revenue, No. 3998, dated 22nd November 1884, I have the honor to state that in paragraph 11 of my letter No. 367, dated 17th July 1883, I submitted proposals for the utilization of the large balance lying to the credit of the Village Service Fund in this district. But my proposal to work off the balance by giving back-pay to the menial servants did not commend itself to the Board of Revenue (*vide* paragraph 10 of Board's Proceedings, No. 697, dated 1st March 1884).

2. As in paragraph 4 of G.O., No. 839, dated 14th July last, communicated in Board's Proceedings, Mis. No. 7061, dated 29th idem, it was directed that, pending final orders, further revision should be deferred, there is no likelihood of the large saving mentioned above being absorbed for the present by giving increased pay to the village officers.

3. If, therefore, there is no immediate probability of the scheme submitted by me being brought into operation all through the district, the only course which suggests itself to me as being one by which the major portion of the opening balance can be reduced is to suspend for Fasli 1294 collections of village-cess at one anna in the rupee in the villages where there is a surplus.

4. From paragraph 3 of my letter, referred to in Board's reference, dated 9th February 1883, it will be seen that the normal charges of the fund are about Rs. 1,43,000. The closing balance of last year was in round figures Rs. 1,60,000 (*vide* paragraph 4 of this office letter printed in Board's Proceedings, No. 1984, dated 11th June 1884). Making due allowance for a moderate working balance, the former amount, taking it to be the cost of the current revenue year, can be met from the latter.

5. The district having suffered generally from the recent cyclone and heavy rains, the suspension of the cess during the current year will, I believe, be looked upon as an opportune boon by the people concerned.

Resolution—dated 6th February 1885, No. 404.

The Collector is referred to paragraph 2 of Board's Proceedings, dated 8th January 1885, No. 45, and he is requested to submit, as soon as possible, proposals for the revision of the village establishments in the remaining taluks of his district.

2. The sanction of Government is requested to giving effect to the proposals approved for the Tiruvallúr taluk in G.O., dated 14th July 1884, No. 839.

(A true Copy and Extract.)

(Signed) E. GIBSON,
Secretary.

To the Secretary to Government, Revenue Department,
with copies of Board's Proceedings, No. 1984,
dated 11th June 1884, and No. 45, dated 8th January 1885.

,, the Collector of Chingleput.

ENCLOSURES.

Proceedings of the Board of Revenue, dated 11th June 1884, No. 1984.

ABSTRACT.—Recording, pending preparation of general report, letter from the Collector of Chinglepat reporting on the operations of Special Local Funds for 1883-84.

Proceedings of the Board of Revenue, dated 8th January 1885, No. 45.

ABSTRACT.—Communicating to all Collectors Government order passing orders on Board's Proceedings reporting that the rules prescribed in 1877 with regard to the clubbing of villages may be advantageously modified.

ORDER—dated 26th March 1885, No. 373, Revenue.

Land Revenue, No. 43.

The Government consider that the scheme already approved for the Tiruvallúr taluk might be considerably improved under the new rules for the clubbing of villages sanctioned in G.O., 10th December 1884, No. 1372, and therefore that it should be revised accordingly, so that the village establishments of the whole district may be organized on the same plan.

(True Extract.)

(Signed) H. E. STOKES,
Secretary to Government.

To the Board of Revenue.
„ the Director of Revenue Settlement and Agriculture.

Exd. W. H. French.

70 Copies.

Govt. of {1885} Madras.

REVENUE

Issued

Recd. *Encl.*

G.O., 26th March 1885, No. 373.

MARCH.

Village Service Establishments.

Scheme approved for the Tiruvallúr taluk, Chingleput District, ordered to be revised under the new rules for the clubbing of villages.

No. 1059

Communicated to the Officers in charge of Settlement Parties.

Dept. of Rev. Sett. & Agre.
Madras, 15th April 1885.

(By order)

1st. Assistant

To
The Deputy Director
No 3 Party

RECEIVED
1 MAY 85

11

Reg. No

C.C.I

7th April 1885, No. 410, Revenue.

236

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

G.O., dated 7th April 1885, No. 410, Revenue.

Miscellaneous.

The attention of Government has been frequently attracted by the continued disregard of the standing orders prohibiting the use of vernacular terms in English correspondence, without explanation attached. The Board of Revenue and other Heads of Departments will now issue fresh instructions to their subordinates prohibiting this practice.

2. Inconvenience is especially felt in regard to names of crops and trees, totally different names being used to denote precisely the same things in different districts, though in regard to the latter there has been some improvement and botanical names are now frequently given. The Board will now, in communication with the Director of Agriculture, draw up a list of vernacular names of crops, with their botanical equivalents, for circulation to and use by Collectors and other officers in the Revenue Department.

(True Extract.)

(Signed) H. E. STOKES,
Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Superintendent, Revenue Survey.
,, the Director of Government Cinchona Plantations, Parks and Gardens, Nilgiris.

Exd. W. H. French.

100 Copies.

Govt. of {1885} Madras

REVENUE.

No. 709

Communicated to the Officers in charge of Settlement Parties, Agri-cultural Reporter to Govt., and Inspector of Cattle Diseases for information and careful attention of the instructions given by Government.

Dept of Rev: Sett: & Agri.
Madras, 23d April 1885

Issued

Recd. Encl.

G.O., 7th April 1885, No. 410.

APRIL.

Frederick Price
Ag. Director of Rev: Sett: and Agriculture

To
The Deputy Director
No III Party

Vernacular Terms.

Directing the issue of fresh instructions prohibiting the use of — in English correspondence without an explanation, and the preparation of a list of names of crops, with their botanical equivalents, for use by officers of the Revenue Department.

RECEIVED
13 MAY 85

No 12

15th April 1885, No. 433, Revenue.

Cd

931

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—Minute by His Excellency the Governor.

Abstract.—Circulating Memorandum by Mr. Thiselton Dyer, C.M.G., on the constitution of a Botanical Department at Madras.

Memorandum on the Constitution of a Botanical Department for the Madras Presidency.

His Excellency the Governor has done me the honor of requesting me to put on paper my suggestions with regard to the organization of a Botanical Department for the Madras Presidency.

2. I need not say that such suggestions can have no official character. They only represent opinions formed on the basis of considerable practical experience from the Home point of view of the botanical needs of our external tropical possessions and of the actual working of the different types of botanical establishments by which those needs may best be met.

3. India possesses one botanical institution, which, though technically provincial, must at any rate in external estimation, from its age (it has nearly attained its centenary), from its scientific traditions, and from the splendour of its maintenance, rank as imperial.

4. Whatever be now or in the future the exact official status of the Royal Botanic Garden, Calcutta, it must always be regarded as standing at the head of the botanical institutions of our Indian Empire. Placed in contiguity to the seat of Imperial Government, it necessarily ranks as the Kew of England in the East.

5. While undertaking as an administrative duty the work of a Botanical Department for Bengal and its associated and dependent Governments, it is so equipped with the resources of scientific staff, herbarium and library, as to bring into focus all that relates to the scientific investigation of the Flora of our Indian Empire as a whole and of its relation to that of adjoining countries.

6. We ought then eventually to be able to look to our botanical officers in Calcutta for the solution of all problems rising out of the practical or scientific study of Indian botany. A close co-operation, as in the past, will, no doubt, always be maintained with Kew. The two establishments will continue to work in scientific harmony. It will therefore, as the knowledge of Indian indigenous vegetation becomes better settled, only be necessary to refer to Kew such problems as, for various reasons, cannot be thoroughly settled without a reference to Europe. Calcutta will then be to British India what Buitenzorg is to the Dutch Indies.

7. It is necessary to premise thus much in order to see clearly what should be the scientific scope of the more strictly localized botanical institutions which India from its vast size undoubtedly requires.

8. Of such botanical institutions of the second order, India at present only possesses one which can be said to be fully organized. Saharunpore is a botanical centre, the scientific prestige of which is only subordinate to that of Calcutta. Its botanical work has always been traditionally regarded as localized to North-Western India and with such resources as are available unofficially to adjacent countries.

9. In other parts of India any definite organization may be said to be wanting. Not that its want has not been felt, but it has been provided for at the best imperfectly and in a tentative and un-coordinated manner. What has been done seems to have produced only moderately useful results with undoubtedly much expenditure.

10. I have put the scientific aspect of a Government Botanical Establishment to the front, because it is the solid and rational foundation of all the rest of its work. The general consensus of all civilized practice has almost always, however associated with scientific botanical work, other duties of a more practical and administrative kind. Besides a herbarium or *Hortus Siccus*, by reference to which the names of plants can be determined, it has been the custom that a botanic garden or collection of living plants should be an integral part of such an establishment. From this it flows naturally that a botanic garden will, in a country like India, be the centre at which new experimental cultures will be started and new cultural industries called into existence. Thus India owes in great part to the Calcutta Botanic Garden its great cinchona enterprise and to Saharunpore the practical inception of tea cultivation, though the initiatory stages must be credited to the Calcutta botanists.

11. I may now attempt to define, or at any rate illustrate, more precisely the actual fu
tions of a botanical establishment :—

I. It will occupy itself with obtaining an accurate and scientific knowledge of the flor
its sphere of operations. This knowledge will be laid up, so to speak, in its offi
herbarium. Hence it will be the routine duty of the staff to identify and supply
name of any tree or plant which for any reason excites the interest or curiosity
any Government officer in the course of his duty.

II. It may be asked why should any one want to know the scientific name of a pla
Simply because vernacular names are numerous, loose in their application, and
current beyond their own localities. A scientific name has universal currency an
therefore the key of knowledge to information relating to the plant that bears it in
civilized language. It is true that a few vernacular names, such as Sal and Te
become so completely and exactly limited in their connotation as to be as good
scientific names and to take their place. But the number of such cases is very f
Take Ebony for example ; this means at least half-a-dozen quite distinct trees
general and no one in particular. If a name, such as Iron-wood, of even wi
application is tried, it is found to be perfectly impossible to fix it in any way whatev
But botanical names have a further advantage. Behind them is always a diagnos
description by which at need the proper application of the name can be tested. Th
when the disquieting statement was made that the Red Bark (*Cinchona succirub*
grown on the Nílgiris was really the less valuable Grey Bark (*Cinchona micranth*
His Excellency the Governor himself was readily able to dissipate the scare by t
simple process of comparing the trees in the plantations with a technical descriptio

III. Besides the herbarium, there should be in the botanic garden of the establishme
a good named collection of the most interesting trees and plants of the country a
such others of exotic origin as are adapted to its climate and desirable to introdu
Actual visual experience is after all the easiest way of learning, and the presence
an interesting tree or plant in a botanic garden is the most direct way of introduci
it to the notice of the inhabitants.

IV. The cultivation of useful plants will naturally bring to the establishment correspon
ence and inquiries about these and others. It will therefore assume—if proper
worked—in course of time the character of a kind of Botanical Intelligence Depar
ment.

V. The effective discharge of its duties in this as well as in the more strictly scienti
directions will naturally lead to correspondence with similar home, colonial, a
foreign institutions. It will confer and reciprocate the advantage of exchange
There is perhaps no line of official work in which there is a more helpful intercour
between the scattered members of the imperial body than is afforded by botanic
business. If Jamaica was in want of the most authentic strain of Black Pepper,
was only necessary to invoke, through Kew, the aid of His Excellency the Govern
to secure a good supply of the much-prized Malabar kind.

12. Hitherto there has been nothing precisely and collectively answering to a Botanic
Department fulfilling the functions indicated above in the Madras Presidency. That o
was needed, however, has long been apparent at Kew from the numerous communications, bo
public and private, relating to the practical as well as the scientific side of botanical business

13. The materials for such a department are however all to hand, and a little organizati
would practically effect all that is needed.

14. *Director.*—Mr. Lawson, late Professor of Botany in the University of Oxford, accept
the appointment of Superintendent of Cinchona Plantations (G.O., October 14th, 1882, No. 111
He was further directed (G.O., April 14th, 1883, No. 443,) to take charge of the Governme
Botanical Parks and Gardens, and subsequently (G.O., August 15th, 1883, No. 987,) w
designated Director of Government Cinchona Plantations, Parks and Gardens, Nílgiris.
made (August 19th) a preliminary report and (September 15th, 1884,) issued as Director t
annual report. As regards a head for the department, a very slight extension of Mr. Lawson
duties is all that is required.

15. *Botanic Garden.*—The situation is not complicated by the existence of any Governme
Botanical Garden at Madras. The existing Government Garden at Ootacamund seems in eve
way the proper seat of the Botanical Department of the presidency. If its remoteness fro
the official capital is deemed objectionable, it may be pointed out that in the cases of Jamai
and Ceylon similar remoteness is no bar to great activity and has many compensating adva
tages. The planting industries of Southern India gravitate to its western side, and t
botanical headquarters should be in the nearest feasible proximity to them. During the sho
time Mr. Lawson has been in charge he has succeeded in picking up the existing threads in t
establishment of botanico-economic work and has reported upon them with precision a
ability. We may confidently, I think, look to him for future reports, which will be inferi

to those of no botanical establishment of the Empire for interest and usefulness. The detailed administration of the Botanic Garden will always require a Curator subordinate to the Director. Mr. Lawson has the advantage of the cordial co-operation of Mr. Jamieson, who has long efficiently filled this position.

16. *Dependent Establishments.*—In order to extract the maximum of usefulness from a tropical Botanical Department, it is found necessary that it should comprise a chain of gardens at different elevations as in Ceylon and Jamaica. Ootacamund will, therefore, require to be supplemented by—

I. *An Intermediate Garden.*—Mr. Lawson apparently has this in view in his proposal with regard to Gúdalúr, where "Government would be able to grow successfully many plants, especially palms, which they cannot grow now in any of their other gardens."

II. *A Tropical Garden.*—This already exists at Barliyár. This must be an exceptionally favored spot for cultural purposes. The Mangosteen fruits here alone in British India. *Amherstia nobilis* has flowered. *Cacao* ripens its fruits (Report 1881-82). *Ipecacuanha*, under Mr. Lawson's directions, progresses. It seeded here for the first time in India (Report 1882-83). *Liberian coffee* was fruiting freely (His Excellency the Governor's Minute, pp. 9—11). *Castilloa* is successfully established (Report 1882-83). Mr. Lawson (August 19th, 1883,) described the garden as "a deadly excavation in a deadly ghât," but subsequently (Report 1883-84) he "cannot help thinking that the unwholesomeness of the place has been exaggerated," and considers "this garden for its size to be the most important one which the Government possesses on the slopes of the Nilgiri plateau." I have no doubt that Mr. Lawson's more matured opinion is the correct one. Unhealthiness judged by the European standard is part of the price which has always to be paid for the cultural advantages of a tropical garden. And in our experience the tropical *dépendance* of a Botanical Department is always complained of in this way.

III. A variety of other Parks and Gardens would, as at present, continue to be under the Director's charge. A similar arrangement works well in Jamaica and elsewhere. But it should be regarded merely as one of administrative convenience, and the botanical work proper should as far as possible be concentrated in its own seat.

17. *Herbarium.*—A thoroughly worked up and named collection of the plants of the Peninsula must, from what I have already said, be an indispensable feature in the organization of the department. It should not merely be the standard of reference for the department, but the official Government herbarium of the presidency. I think I may assume without argument what every civilized Government now admits that the study of the natural features and productions of the country it administers is one of its obvious duties. It must, I think, be also allowed that Madras has very imperfectly so far recognized this. The bulk of our knowledge, still confessedly most imperfect, of the botany of the southern portion of the Peninsula is due to the unofficial labors of two distinguished Botanists—Doctor Wight and Colonel Beddome. The existing Government herbarium is preserved in the Government Central Museum, Madras. It comprises the important collections of Colonel Beddome, which, I believe, were purchased by the Government. Mr. Lawson has inspected the herbarium and reports, "the specimens . . . . . are in excellent order. The sheets on which they are fastened are free from dust, and there is no trace of the plants ever having been attacked by insects." It is clear, therefore, that it has been admirably conserved. But I understand that the plants are kept tied up in bundles in drawers and the genera arranged * alphabetically, while the plants of separate collections have been kept distinct. These facts, if true, tell their own story; they prove that the herbarium cannot have been much used at Madras for scientific purposes. Now a herbarium is after all an instrument which it is little use keeping, however carefully in its case. To be efficient, it requires the living presence of a skilled botanist who is constantly using it, noting its defects, and sparing no pains to make it perfect. I am far from wishing or intending in the remotest degree to reflect on Dr. Bidie. It is only necessary to refer to his reports to wonder how he can possibly manage to carry on single-handed so successfully all the lines of work comprised in the museum under his charge. Mr. Lawson with characteristic activity has set to work to create a herbarium at Ootacamund. In his tour, accompanying His Excellency through the Anaimalais, he made large collections (Minute, October 3, 1884); as detailed in his (1883-84) report, he has had liberal assistance from other quarters. He has got together some 4,000 † species, "the most part of which are correctly named." Some help in this respect has been rendered from Kew.

The herbarium under Dr. Bidie's charge has been reinforced on the other hand with upwards of 4,000 sheets from Dr. Wight's invaluable herbarium, which has been presented to the Royal Gardens as a private gift. Other contributions have also been made. Now I cannot see the use of the Government running, as is now practically the case, two independent State herbaria. What it possesses in this direction should, in my opinion, be concentrated where it is most wanted and will be most used, namely—in connection with the proposed Botanical Department at Ootacamund. I would recommend, therefore, that the necessary steps be taken to transfer to Mr. Lawson's charge the Government herbarium from the Central Museum, Madras, and this, with the collections he has made and will continue to make, should be housed in a proper building.* In return Mr. Lawson should be instructed to have prepared a mounted set of authentically named and typical representatives of the Peninsula flora, which might, as heretofore, serve as a standard of reference for residents in Madras who wish to identify their plants.

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* This is no longer the case. They have been carefully arranged according to the *Flora Indica* so far as that work has gone.—M.G.D.

† Many more—and as a pure labor of love.—M.G.D.

This being arranged, it should be the business of the Botanical Department, with the necessary Government authorization put formally on record and with the recognized assistance of the Forest Department, to push on the scientific investigation of the Flora of Southern India. The department should be in constant correspondence with the Central Imperial Indian Herbarium at Calcutta. It should charge itself, in fact, with the adequate performance of its share of the systematic botanical survey of India. To further this end the Madras Government should be prepared to make a small annual grant for the maintenance of collectors in districts of which the vegetation is still imperfectly known, more especially in the contiguous Native States. The flora of the apices of all peninsulas is always peculiar and interesting. Some of the most important problems in the geographical botany of India still await their final solution pending the investigation of the outlying parts of Southern India. The department would take care to furnish Calcutta and Kew with sets of their new collections. Both would reciprocate by donations from their duplicates, and Kew would furnish the elucidation of the freshest modern botanical scholarship. The Botanical Department would on this ground alone speedily attain a scientific position and reputation, and the Madras Government, by giving its countenance to the work, would remove from itself the reproach under which it undoubtedly at present labors of having done nothing officially for the botanical investigation of the countries under its rule, or of having materially contributed anything to aid in the preparation of the Flora of British India now in preparation at Kew under the authority of the Secretary of State.

18. *Museum.*—Mr. Lawson has got together "a small collection of woods, fruits, seeds, and other vegetable products of economic interest to those living on the Nílgiri plateau." Such a collection is an indispensable adjunct to the department. It should not, however, be a showy or expensively installed collection for public display. The proper seat for this would be the Central Museum under Dr. Bidie's charge at Madras. But it should be a working series illustrative of the business and communications on economic subjects passing through the Director's office. Recent correspondence, for example, with regard to Piney Tallow has shown that even in the presidency itself the history of its botanico-economics is very imperfectly known. As each subject is from time to time worked up, the specimens illustrating it, carefully and properly authenticated, should be preserved for future information and reference. The same museum like the herbarium might, with a proper official understanding, subserve the purposes of the Forest Department, and that department might with great propriety make some small annual contribution in respect of the maintenance of both.

19. *Library.*—It is obviously unwise economy to refuse a competent man the needful appliances for his work. A small, but carefully selected, library should gradually be brought together, which should comprise all the leading books on Indian botany, especially such as are cited in the "Flora of British India." To these should be added all works useful for reference bearing on the actual or possible cultural industries of Southern India. The library, being an office library, should be in the same building as the Director's office and at no great distance from the herbarium and museum.

20. *Correspondence and Archives.*—The great thing in administrative existence is to deal with a subject when it arises effectively and once for all. What strikes me, as I believe it has struck others, in connection with Indian work is the perpetual and recurrent oblivion of the past. Correspondents constantly write to Kew from Southern India as if the country had only recently been rescued from the deepest obscurity, and this is true, not merely of private individuals on their own behalf, but of representatives of large enterprises whom it might have been supposed would have mastered the A B C of their business before plunging into its actual inception. It seems absurd that practical men should constantly prefer to write Home rather than to utilize sources of information available on the spot. What then is imperatively needed is, in connection with the botanical establishment, a sort of intelligence department in which all available information on any subject likely to interest the planting or industrial communities should be systematically posted up and filed. This is done at Kew in simple self-defence. When the routine correspondence is examined each morning, it is impossible to predict from what quarter of the world or upon what subject an inquiry may present itself. It is necessary

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* The climate of Ootacamund is better for the conservation of plants than that of Madras—perhaps even than that of England. The old laboratory can be adapted for a very small sum.—M.G.D.

then to have the materials for such inquiries cut and dried in advance. And the same system, to meet in degree the same need, is required at every botanical centre. As soon as it is known throughout the presidency that there is an officer with the necessary means of information prepared to deal with reasonable inquiries, there is no probability that his services will not be put in requisition. The annual reports of the department should briefly touch on any subjects which have been brought under its notice and occupied its attention during the year. Records should also be given of the progress of interesting plants entrusted to planters and others in different parts of the Presidency for experimental purposes. In the Botanical Department in Jamaica and to a less extent elsewhere it is found convenient to prepare and issue from time to time for general information a carefully prepared *précis* on any subject on which for the moment more than ordinary interest is manifested. Of course when the more trivial matters are filtered out and dealt with, the more difficult may, either officially or semi-officially, always be referred to Kew for the best available Home scientific examination and report.

The routine Government papers relating to botanical matters, which are from time to time issued by the Madras Government, and of which it has for some time been so obliging as to furnish Kew with copies, will afford an admirable nucleus for the Director's archives. It is a matter of constant surprise to me how admirably served the Government is even with the present system. But the information does not appear to me to permeate, and it is to facilitate this that the arrangement I now propose is directed.

21. I have now dealt with all that appears to me material relating to the organization of the department. I observe, however, that in his letter of August 19th, 1883, and report for 1883-84, the Director recommends that an extended series of meteorological observations should be undertaken by his department. This, from what I have observed elsewhere, I venture to think unadvisable. Such observations should, of course, be taken on the Nílgiri plateau. But meteorology has now passed out of the amateurish stage. If undertaken by the Government, as is certainly proper, it should be with the best methods and in harmony with the work of other meteorological stations throughout the Empire. It is not within my province to say what department of the executive should be charged with this duty. But I am quite clear that it is unadvisable for the Botanical Department to burden itself with what is in no way within its proper scope.

Arrangements might, however, very properly be made for posting the daily meteorological data at the entrance of the Botanical Garden.

22. The suggestions I have made will involve some immediate expenditure. The Madras Government has however, I believe, earned large sums by the cultivation of cinchona. Supposing that the proposals I have made commend themselves to His Excellency's Government, then I think there is a strong case for a fair, but in no way extravagant, outlay to put the new department on a proper working footing. And I here feel bound to point out, though entirely on my own initiative, that the salary and position of the Director will require consideration. Mr. Lawson was presented to the India Office for his present appointment in reply to an official communication of May 6th, 1882, in which "the services of a person of good scientific attainments and botanical experience together with some administrative capacity" were asked for "to take charge of the Government Cinchona Plantations on the Nílgiris." For this a salary of Rs. 600 a month was offered. Now Mr. Lawson's official duties were very speedily extended, and in all probability they will be still more so. I am quite sure that the Madras Government, on general grounds, will not be satisfied that a salary which it deemed proper for one set of duties should still be held sufficient when these are very considerably added to.

* * * *

24. *Agri-Horticultural Society, Madras.*—This is the only Botanical Garden in the plains of Southern India and, though subsidized by the Government, is not under its control. Founded in 1835, its establishment and early management owed everything to its first Secretary, Dr. Wight. The Government granted it 7 acres of land, to which an extension was sanctioned in 1855. From a sketch of the history of the Society drawn up by Dr. Bidie in 1869, it is abundantly evident that its operations have been of the greatest usefulness to the Madras Presidency. To its experiments in 1840 may be attributed the introduction of coffee cultivation. This is merely to cite one instance; but, if it had done nothing more than encourage the cultivation of European vegetables and of indigenous and naturalized fruits of superior quality, it would have earned the lasting gratitude of the community. It is much to be regretted that in more recent years the more scientific aspects of the garden seem to have been sacrificed with little consideration. That, however, is a matter upon which, as a private institution, the Society is entitled to judge for itself. At Kew we can only measure its activity by its proceedings, which certainly, for quick appreciation of the wants of the moment and careful editing, are not surpassed by anything of the kind published in India. The operations of the Society would not, I think, be interfered with by that of the Botanical Department which I have proposed. On the contrary I think that relations of the most friendly kind should always be cultivated between them. Furthermore, in consideration of the support which

Government extends to the Society, I think it might be fairly asked to act as agent to the department and undertake to receive and transmit its consignments of plants from and to other countries.

25. For the sake of directness of expression I have written this memorandum in the first person. Sir Joseph Hooker, however, authorizes me to say that, having given his best attention to the matter, all that I have written has his entire concurrence.

Kew,
10*th February* 1885.

W. T. THISELTON-DYER.

Order—dated 15th April 1885, No. 433, Revenue.

Miscellaneous.

His Excellency the Governor in Council cordially approves, and is much indebted for, the suggestions for the constitution of a Government Botanical Department in this Presidency, which have been put forward by Mr. Thiselton Dyer with the concurrence of Sir Joseph Hooker. The measure will, besides subserving the interests of science, be of great and immediate practical utility, while it can in present circumstances be carried into effect at a very small cost to Provincial Funds, to which it is hoped the sanction of the Government of India and of Her Majesty's Secretary of State will be readily accorded.

2. Mr. Lawson will, of course, be the head of the new department, and his pay should, in the opinion of Government, be raised from Rs. 600 to Rs. 800 per mensem rising to Rs. 1,000 in five years. He is serving at present under no definite conditions, and the Government consider that his service from the commencement should be declared to count for leave and pension, and that he should be admitted to the benefit of the more favorable leave rules. Application will be made in the Financial Department for sanction to these proposals.

3. Under the new arrangement, Mr. Lawson will retain charge of the Cinchona plantations and the superintendence of the Botanical Gardens and Parks on the Nílgiris as at present. His official designation will be Government Botanist and Director of Cinchona Plantations.

4. On receipt of sanction, orders will issue on the minor points of organization noted in Mr. Thiselton Dyer's memorandum.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Financial Department.
,, the Director, Government Cinchona Plantations, Parks and Gardens, Nílgiris.
,, the Superintendent, Government Central Museum.
,, the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Superintendent, Revenue Survey.
,, the Inam Commissioner.
,, the Public Department.
,, the Military Department.
,, the Public Works Department.
,, the Accountant-General.

Exd. W. H. French.

150 Copies.

Govt. of (1885) Madras

REVENUE.

No. 800

Communicated to the Officers in charge of Settlement Parties, the Agricultural Reporter to Government and the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 9th *May* 1885.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No. 3 Party
,, ,, Special Assistant Collector, Nilgiris and Malabar.
,, ,, Agricultural Reporter to Government.
,, ,, Inspector of Cattle Diseases.

Issued

Recd. *Encl*

G.O., 15th April 1885, No. 433.

APRIL.

Botanical Department.

Orders passed on proposals regarding constitution of a — in the Madras Presidency

RECEIVED

13

20th April 1885, No. 449, Revenue.

24-

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GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following Proceedings of the Board of Revenue, dated 10th March 1885, No 805 :—

Read—the following letter from L. R. BURROWS, Esq., Collector of Nílgiris, to the Director of Revenue Settlement and Agriculture, dated Ootacamund, 5th December 1884, No. 3147 :—

In forwarding the final report of the Special Assistant Collector on the results of the Revenue Settlement of the Nílgiri portion of this district, ordered in G.O., No. 1345, dated 16th October 1880, I have much pleasure in bearing my testimony to the thorough and judicious manner in which this difficult task has been accomplished by Mr. Benson.

2. The financial results of the settlement, though eminently satisfactory, are unimportant compared with the introduction of order into the chaotic state of things which prevailed prior to 1881, when the settlement was commenced. In correcting the abuses, which had then become scandalous, as regards the appropriation of State lands by private persons, and in asserting the rights of the State wherever and by whomsoever they had been invaded, Mr. Benson has had an arduous and disagreeable task. But although he has done it in a manner which, I think, is entitled to be viewed with satisfaction by Government, he has shown such great tact and patience that he still remains thoroughly popular with all classes of the community.

3. Mr. Benson's report is a valuable and interesting account of the land revenue system of the Nílgiris from the early part of the century down to the present time, and I presume it will be printed with the final orders passed on it by Government.

Enclosure No. 1.

From R. S. BENSON, Esq., Special Assistant Collector, in charge, to the Director of Revenue Settlement and Agriculture (through the Collector of the Nílgiris), dated Ootacamund, 20th November 1884, No. 573-237.

The revenue settlement of this district, ordered in G.O., No. 1345, dated 16th October 1880, having now been completed, I have the honor to submit a brief report on its results.

Scope of Settlement Operations.

2. The scope of my operations extended to the whole of the Nílgiri District, with the exception of the Ouchterlony Valley and South-East Wynaad, which were transferred from Malabar to the Nílgiris in 1873 and 1877, respectively, and the land tenures of which differ *in toto* from those of the other parts of the district. The portions to be settled were, therefore, the four ancient divisions (or, as they were sometimes called, villages or náds) known as—

(1) *Merkunád*, with the slopes below Manaar transferred from Coimbatore by G.O., No. 102, dated 12th January 1877.

(2) *Paranginád.*

(3) *Kundahnád*, with the tract known as Kinnakorai transferred from Malabar by G.O., No. 19, dated 5th January 1881.

(4) *Todanád*, with the Sigúr plains as far as the Moyar river, which forms the district boundary on the Mysore side.

Area.

The area of this tract is 433562·01 acres, or 677·44 square miles.

Statements attached to the Report.

4. The four statements attached to this report contain statistics of the more important facts ascertained at settlement. These statements are :—

Statement I.—Showing, by villages and náds (divisions), the area of the settled portion of the Nílgiri District, together with the occupied area and the assessment of the same, according to the revenue accounts, (1) immediately prior to survey and settlement, and (2) immediately subsequent to survey and settlement, together with the area and assessment of lands granted at settlement.

Statement II.—Showing the area of land held under each rate of assessment in the settled portion of the Nílgiri District or on free-hold tenure.

Statement III.—Showing, by villages and náds (divisions), certain statistics of population, cultivation, &c., in the settled portion of the Nílgiri District according to the settlement accounts.

Statement IV.—Showing, by villages and náds (divisions), the area of lands registered at settlement as available for sale, reserved for various public purposes, &c.

Résumé of Revenue System of Nílgiris.

5. In order to understand the objects of the settlement and the results achieved thereby, it is necessary, before examining the above statements, to give a brief *résumé* of the former revenue history of the district. The subject has been so ably and exhaustively dealt with by Mr. H. B. Grigg in his Manual of the District, that I need not do more than notice those prominent features which influenced, or which explain, the condition of the revenue system as it existed immediately prior to settlement.

McLeod's Settlement, 1800-01.

6. When the Nílgiri Hills were ceded by the Mysore to the British Government, they formed part of the Dévanaiken Kóta Taluk of North Coimbatore, and the revenue system which prevailed in the cultivated portions was similar to that which existed, and still exists, in Coimbatore. This district was, therefore, included in Major McLeod's settlement of 1799, the object of which was to remedy the evils which resulted from Tippu's excessive assessments in the Coimbatore District. The lands were nominally measured and assessed with reference to their productive capacity in 1800-01, the result being that the total land revenue rose from Rs. 13,425 to Rs. 18,276. Fifteen rates of assessment, varying from Rs. 1-2-5 to Rs. 0-1-3 per acre, and *all* containing fractions of an anna, were then in existence, and these rates remained unchanged until 1862 on the lands held by the cultivating native tribes of the district, viz., the Badagas, Kotas, Irulas and Kurumbas. A similar, though not identical, series of rates prevailed, and still prevails, in the tract which extends from the foot of the hills on the Sígúr side to the Moyar river.

Peculiar Incidents of the Hill System.

7. Though the revenue system was that of Coimbatore, certain peculiarities, which existed to a small extent in other parts of that district, prevailed so extensively on the hills as to almost cause the hill system to be regarded as distinct and unique.

These peculiarities were—

(*a*) The Bhurty (or shifting) system of cultivation.
(*b*) The *Iyen* grass (or fallow) privilege.
(*c*) The "*Paravapillu vari*" (or grazing) privilege.

The Bhurty Privilege.

8. The former existence and subsequent abolition of the "Bhurty" (or shifting) system of cultivation are, perhaps, the most important facts in the Revenue history of the district, and as such merit detailed notice. The system appears to have existed from the earliest times, and though, in effect, forbidden by Tippu, and formally abolished in 1862, so that Mr. Grant, the Collector, reported in 1864, that the system "has ceased and the people now regard it as a by-gone system; it is never alluded to," yet it continued in almost undiminished operation until the recent survey of the hills, and even since that date, attempts have been made to continue the practices formerly admitted under its shadow.

The "Bhurty" System continued.

9. Under the "Bhurty" system, each cultivator held from Government a putta for the area of land which he ordinarily cultivated in each year; but the available land being practically unlimited as compared with the demand for it and being of little value to Government, the cultivator was permitted to cultivate a different plot each year, shifting from one place to another at will within certain limits, but retaining, by common consent and without payment, a preferential claim, or lien, on the plots formerly cultivated by him, and returning to them in rotation after two, three or more years, according to the nature of the soil and the period of fallow which was considered necessary to restore its fertility. Thus, though the area in a man's putta, and for which alone he was charged assessment, might be only ten acres, he was in the habit of cultivating in rotation various plots of land aggregating thirty or forty acres, or even more in poor and sparsely-populated tracts. Nor were these several plots defined or limited or even identified except by the rude names of the fields entered in the putta at the suggestion of the ryot or the caprice of the village headman. There was no demarcation or survey, and consequently, in practice, the disposal of all lands lay with the village and subordinate revenue officials. If they did not wish an applicant for land to be successful, it was easy to set up some claimant in the locality to petition that he had a preferential claim to the land under the "Bhurty" privilege, and they were thus enabled to defeat the object of the applicant or to compel him to buy off their opposition or to purchase the consent of the claimant.

The "Iyen" Grass Privilege.

10. The "Iyen grass," or fallow, privilege, was that under which the ryot was allowed to retain in his possession a certain portion of his holding as fallow at one-fourth of the appropriate assessment. The extent so held was not to exceed one-fifth of his regular holding. The effect of this privilege was still further to extend the area of waste land over which, at but little cost, an individual or a community might make a claim in opposition to an applicant whose proximity was not desired.

The "Paravapillu Vari" Privilege.

11. The third incident peculiar to the revenue system of Coimbatore, and the effect of which was similar to the last, was known as the "Paravapilu vari," or grazing, privilege, in accordance with which, extensive areas were often granted as pasture lands at one-fourth of the ordinary assessment until required for cultivation.

Evils of these Privileges.

12. The evils of these various privileges were scarcely felt during the first thirty or forty years after our advent to the district, but with the gradual increase of population and the strong demand for land by European coffee-planters which set in about 1860, it became impossible any longer to continue privileges so opposed to the development of the district and so economically unsound.

The Bhurty System abolished, 1862.

13. In 1862, after much discussion, Government determined that the "Bhurty," or shifting system of cultivation, should be abolished on the principle prevailing in the plains that the ryot must pay assessment for all the land he is entitled to cultivate. The native cultivators were accordingly informed of this decision, and were required to select, once for all, such of the lands over which they claimed the "Bhurty" privilege as they wished permanently to retain. These lands were measured and, in many cases, roughly demarcated and fresh puttas embodying the results were issued. To compensate the ryots for the loss of the privilege, the fifteen fractional rates which had previously existed were reduced to five simple rates as follows:—

				As.
(1)	For assessments above 13 annas	...	... ...	10
(2)	Do.	below 13 „	but above 9 annas	8
(3)	Do.	„ 9 „	„ 6 „	6
(4)	Do.	„ 6 „	„ 4 „	4
(5)	Do.	„ 4 „	... ...	2

The reduction thus granted amounted on the average to about 25 per cent. of the assessment, and, together with the new markets for the labor and products of the district then opened up by the impulse given to the planting enterprise, reconciled the ryots to the loss, or supposed loss, of their ancient and dearly-loved privilege; so that in 1864, Mr. Grant, the Collector, was able to report that the change had been successfully introduced and that the former system was regarded as dead and gone and was now not even alluded to by the people.

But only in name.

14. But such a statement was hardly in accordance with the facts. "The Hindu is not wont thus readily to abandon his privileges and the institutions of his ancestors. He said 'yes,' but went on ploughing and planting as heretofore, until an accurate survey revealed the true position. In fact, each year has the area of cultivation and permanent occupation been extending with the growth in numbers of the Hill tribes, the increase of wealth among them, and the great extension of plantations."—*Grigg's Manual of the Nilgiri District, page* 321.

The "Bhurty" system had, indeed, been abolished by order of Government and the Secretary of State. It had ceased to exist as an officially-recognized institution or privilege. Very likely the ryots never alluded to it. Why should they? But they quietly practised it as much as ever. Their putta lands were not defined. The village headmen were among those most interested in conniving at, and maintaining, the condemned practices. Three Revenue Inspectors and as many Curnams (Accountants) comprised the whole staff of subordinate Revenue officials in the district, and they could not have effectually enforced the orders of Government, even had they desired to do so. The higher officials seem, like Mr. Grant, to have been ignorant that the dead system was still alive and flourishing, so no pressure from above was put upon the subordinates to enforce its abrogation, while many inducements from beneath were offered to tacitly permit its continued existence. Naturally the ryots were satisfied. They had, in fact, lost nothing of their privileges. They had gained by a large reduction in the rates of assessment.

Erkâdu Kothukâdu System of Kundahs abolished 1862.

15. Concurrently with the so-called abolition of the "Bhurty" system in Merkanád, Todanád and Parangínád, Mr. Grant abolished the peculiar system in vogue up to that time in Kundahnád which had been transferred from Malabar to the Nílgiris in 1860. This system was known as "*Erkâdu Kothukâdu.*" Under it a tax of Re. 1 or Rs. 1-8-0 was levied for the right to use a plough or "*Er,*" and a tax of from 4 to 8 annas was levied for the right to use a hoe or "*Kothu.*" The so-called putta issued to the ryot under this system was really no more than

a license to use one or more ploughs or hoes, as the case might be. It merely specified the amount payable for each instrument, but in no cases were the extent or position of the lands to be cultivated stated. The ryot used his implements whenever and wherever he pleased. No restrictions, even on the felling of forests, were imposed, so that the hill-sides and valleys were cleared at will.

Except in Kinnakorai Village.

Solitary forest trees still stand in the cultivated fields to show where extensive woodlands once existed. The system was abolished in 1862-63, and in its place was set up the system supposed to have been newly established in the rest of the district; but on the Kundahs, as elsewhere, the "*Bhurty*" system continued in full vigour long after its supposed abrogation; until, in fact, its control was rendered possible by the recent demarcation and survey of holdings. During the settlement I found this *Erkâdu Kothukâdu* system still in force in the flourishing Badaga village of Kinnakorai with some fifty houses, transferred from Malabar in 1881. So long, at times, does it take for our reforms to reach the more remote tracts!

The Todas.

16. Before referring to the operations of the Survey Department, it will be convenient to glance at the other tenures under which lands are held in the district. The Todas, as the most ancient inhabitants, first claim our notice. The earliest settlers, and notably Mr. Sullivan, strongly advocated the claim of the Todas to the absolute proprietary right to the plateau; but another school, led by Mr. Lushington, as strongly combated these views, and, apparently, regarded the Todas as merely occupiers under the ryotwari system in force generally in the Presidency. From the earliest times the Todas have received from the cultivating Badagas an offering, or tribute, called "*Gudu*," or basket of grain, partly in compensation for the land taken up by the latter for cultivation and so rendered unfit for grazing purposes, but chiefly as an offering to secure the favor, or avert the displeasure, of the Todas, who, like the Kurumbas of the jungle, are believed by the Badagas to have necromantic powers over their healths and that of their herds. The European settlers also bought land in Ootacamund from them, and to this day Government pays them the sum of Rs. 150 per annum, as compensation for interference with the enjoyment of their pastoral rights in and about Ootacamund. Their position was, however, always a matter of dispute until it was finally laid down in the despatch of the Court of Directors, dated 21st January 1843. It was then decided that the Todas possessed nothing more than a prescriptive right to enjoy the privilege of pasturing their herds, on payment of a small tax, on the State lands. The Court desired that they should be secured from interference by settlers in the enjoyment of their munds (or village-sites) and of their spots appropriated to religious rights. Accordingly puttas were issued granting to each mund three bullahs (11·46 acres) of land. In 1863 Mr. Grant obtained permission to make a fresh allotment of nine bullahs (34·38 acres) to each mund on the express condition that the land should be used for pasturage only and that no right to sell the land or the wood on it should be thereby conveyed. It may be added that the so-called Toda lands are now regarded as the inalienable common property of the Toda community and unauthorised alienation is checked by the imposition of a penal rate of assessment—*G.O., No. 397, dated 18th April* 1882. Up to the date of this order, however, alienations by sale or lease were of frequent occurrence. It remains to be seen whether the present orders and subordinate staff will be more adequate than those that went before to check the practices referred to.

Lands held by Immigrants.

17. We shall now consider the tenures of lands held by European and other immigrants. The first European settlers bought lands, as has been already noticed, from the Todas, but in 1828, Government required them to take out leases from Government and imposed an assessment of 1½ pagodas (Rs. 5-4-0) on each cawnie (1·32 acres) of land thus leased. Many properties are still held on these old leases. This high rate of assessment was held to apply to all lands, even those held for agricultural purposes, in the uplands of Todanád. This rate was considered to be excessive and likely to check the extension of cultivation, so in 1836, Government, at Mr. Sullivan's suggestion, reduced the rates on cultivated lands at a distance from Ootacamund to an equality with those paid by the Badagas, but imposed special double rates on cultivated lands taken up by immigrants in Ootacamund, on the ground that the land was exceptionally rich and that a good market for produce was close at hand. The limits within which these higher rates prevailed are those now known as the limits of the Ootacamund settlement. In the same year, it was determined that the assessment on house-sites should be reduced to Rs. 5-4-0 for the first cawnie only of the area occupied, the remainder being charged at Rs. 1-2-4 per cawnie. In 1842, an elaborate manual of rules for the disposal of lands was drawn up, but it did not come into force until 1849 on the completion of Mr. Ouchterlony's survey. It provided for the grant of thirty years' leases for agricultural purposes and ninety-nine years' leases for building sites, the latter being renewable every thirty-three years. Many conditions (now rarely observed) are inserted in these leases, and, in particular, one which provides that on the expiration of the lease, the land with its buildings reverts absolutely to Government. In the cantonment of Wellington, leases for fifty years are granted under similar but

not identical conditions. Some modifications were introduced in 1858, and in the following year the redemption of the land-tax was authorized at twenty years' purchase, subsequently raised to 25 years' purchase.

Waste Land Rules of 1863.

18. The abolition of the "Bhurty" system, which has been already noticed, was the necessary preliminary to any general system of auction sales of land such as the Government had for some time been desirous of introducing. So long as large and indefinite claims under the "*Bhurty*" system could be brought forward and supported by the kinsfolk and friends of the claimants, who were usually the only witnesses that could be examined as to the validity of the claims, it was practically impossible for applicants to obtain land from Government. On its abolition, therefore, the Waste Land Rules of 1863, which had long been under discussion, were finally adopted, and an Act (No. 23 of 1863) was passed to facilitate the disposal of claims made to lands about to be sold under the rules. The main provisions of these rules were that land was to be demarcated and surveyed on being applied for and was then to be sold to the highest bidder subject to an upset price to cover the cost of survey and subject also to an annual assessment of Rs. 2 per acre of forest and Rupee 1 per acre of grass land. The assessment on grass lands was reduced to 8 annas per acre by order of Government in 1871, and, from time to time, considerable relaxations have been made by exempting land from assessment for some years after its purchase.

The Sígúr Tract exceptional.

19. It is to be noticed that neither the Waste Land Rules, nor the simple rates introduced by Mr. Grant in 1862, have ever been applied to the Settlement village of Musinigudi, that is, to the tract of country lying between the foot of the Hills on the Sígúr side and the Moyar river. Lands there are still obtained under the "*durkhast*" (simple application) system prevalent in the low country, and numerous rates of assessment, all containing fractions of an anna, still prevail, unchanged since the beginning of the century. The survey of all estates in this tract was completed with the general survey of the district and the survey of all putta lands and the revision of assessments therein has recently been ordered.—*G.O., No.* 986, *dated 4th September* 1884.

Objection to Waste Land Rules.

20. When the Waste Land Rules were passed, it was decided that henceforth no lands should be granted to any one, not even to the Hill tribes, except under those rules. Considerable areas were sold to European planters during the first three years after the rules were in force, but they were never popular and the sales soon fell off. Between 1867 and 1874, the sales never exceeded 850 acres in any one year, and in 1868-69 they only amounted to 4 acres! The district was without an adequate staff of officials. Great delay occurred in the survey and sale of land applied for. When the sale took place, there was nothing to prevent an outsider from coming in and buying the land over the applicant's head or bidding him up to such a figure as effectually depleted his cash balance and left him unable to develope the estate. Sometimes this was done through mere enmity, more often to prevent new comers from obtaining land near existing estates and thus reducing the supply of labor and manure; or in the hope that the purchaser would be able to sell the land (as he often did) a few days after the auction to the disappointed applicant, who would often, on consideration, think it better to pay an enhanced price rather than incur the delay, uncertainty and expense of making a fresh application.

General Survey began, 1878.

21. Prior to 1870, blocks of land applied for under the Waste Land Rules, and properties in and about the settlements of Ootacamund, Coonoor and Kótagiri, had been, from time to time, surveyed, but it was not until 1870 that a general survey of all lands was ordered, including lands in the occupation of the Hill tribes. Owing to the want of village establishments, the unhealthiness of the district, the advent of famine (1876—78) and other causes, the survey proceeded slowly and was not completed until about 1880. In its course it was found that, owing to the increase in the numbers of the Hill tribes, mainly Badagas, the area actually under cultivation by them had greatly increased since the puttas of 1862 had been given to them. Scarcely an acre of land had been bought by them under the Waste Land Rules, but (as explained in paragraph 9), the position of their putta lands were undefined and there was no one to check their acts. Consequently, they had gone on increasing their cultivation at will as their numbers grew; and they, moreover, still practised the "*Bhurty*" (or roving) system of their ancestors, which was nominally abolished in 1862, but which really still flourished without let or hindrance. The Survey officers thus found the Hill men actually cultivating more land than was in their puttas and claiming still larger areas on the ground that they had recently cultivated them and had a prescriptive right to hold them. There would, undoubtedly, have been extreme hardship in an order to recognize the puttadar's title only to the areas shown in their puttas; and, consequently, orders were issued to treat the puttadars liberally. In fact, the operation which Mr. Grant thought he had effected in 1862 was now again (or, perhaps, more accurately for the first time) to be carried out. In practice, each man was allowed to take up whatever land he had at any time cultivated under the "*Bhurty*" system, and often, too, adjoining lands which had never been cultivated, but which

might soon be useful either for extension of cultivation or for sale to other persons; for, in order to avoid the risks and inconvenience inseparable from applications under the Waste Land Rules, planters had now begun to apply to native land-owners rather than to Government for such land as they required, and the more frequently when Government began to refuse applications for forest land, which is the only kind suitable for coffee-planting.

Malpractices at Survey.

22. It is true Badagas rarely had land in localities suitable for coffee-planters, but then there was nothing to fix the position of the lands shown in their puttas. No one, in fact, knew the position except the owners and the men of their own village. It was easy to make an arrangement by which they should all agree to say that the land was in a certain spot which had been fixed upon as suitable for a coffee or other plantation. The subordinate officials of both the Revenue and Survey Departments were poor and easily open to persuasion. Indeed, in many cases, they either obtained, or intended to obtain, land in this way themselves. Little by little the practice, which had begun in fear and trembling, grew with impunity into a regular system and embraced large areas in its operation. Owing to the existence of the Irulas and Kurumbas of the jungle, it was often possible to find small patches of land which had once been cleared in the midst of the virgin forest, and this lent color to the misappropriations, and it was always easy to assert that small, poor forest was, in reality, secondary growth and had once been cleared. Many thousands of acres of Government land (grass scrub and virgin forest) were thus claimed and demarcated as private property. It was not uncommon to claim a couple of hundred acres of forest or scrub under a putta for half-a-dozen acres of ordinary land in some distant village. In one case I remember 1,000 acres on the Hulikal slopes were claimed under a putta for 1 bullah (3·82 acres).

Not noticed until 1878.

23. Owing to the position of the subordinate Revenue and Survey officials, as already noticed, and the paucity of superior officers, this state of affairs did not come prominently to notice until the complete survey registers began to come in and puttas were under preparation for the areas as ascertained by survey. Indeed, puttas for the three Settlements and for Merkanád were issued in, or prior to, 1878 without much notice having been taken of the excess lands included by survey with the private holdings. In that year, however, Colonel Cloete and Mr. Barlow got information of the state of affairs, and several reports were written, which are embodied in G.O., No. 793, dated 5th April 1879. This order laid down certain general rules for dealing with all cases of excess, and some few were settled in accordance with its principles.

State of the Revenue Accounts.

24. The state of the revenue accounts also and of the village establishment required revision. There were no revenue villages, for the old náds (sometimes called villages), more properly corresponded to taluks or divisions. Tódanád alone contains 217,000 acres. There were hardly any village establishments, and such as existed were miserably remunerated. Scarcely a headman in the district could read, and the land revenue accounts of all lands, except those in the quit-rent and plantation registers, were supposed to be kept by four Curnams paid about Rs. 3 per mensem each. As a fact, it may be said that no accounts were kept except the Chittah (Individual Ledger) and some imperfect collection accounts. Many of the original accounts had been destroyed by the persons interested after the revelations of 1878, with a view to hinder the prosecutions then ordered. The quit-rent and plantation registers, which related mostly to the lands of European planters or to lands in Coonoor and Ootacamund, were kept in the Commissioner's Office, and, as the bills for assessment were also issued from his office, much of his time was spent in matters which would properly devolve on the Tahsildars. It often happened, too, that, between these several registers kept by the Curnam and the Commissioner, land escaped registration (and assessment) altogether. Each office thought that the land was in the other's register. There were no general registers for fixed areas, nor did the registers usually state the tenure on which any land was held. Some lands were ordinary putta lands. Others were held on restricted puttas, of which there were three classes:—those issued to (1) Europeans, (2) Todas, and (3) Irulas. Other lands were held under Waste Land Rules, deeds, or under permanent puttas or under ninety-nine years' leases, or (in Wellington) fifty years' leases. There were also quit-rent lands not held on lease, and free-holds and firewood allotments, and lands held on special deeds or terms. In such a multiplicity of titles it is easy to see how important it is that the registers should be clear and well kept.

Special Settlement Officer appointed 1881.

25. The superior staff of the district had, however, been recently reduced, though the work of the district had enormously increased with its general development, the addition of the Ouchterlony Valley and South-East Wynaad, and the rush caused by speculation in the gold mining and cinchona industries. It was, therefore, impossible for the Commissioner to scrutinize the survey registers or carry out the orders of Government, and he had no assistant or superior revenue subordinate to whom the work could be delegated. It thus became absolutely necessary to appoint a special officer to examine and revise the registers. It

was considered that it would not be possible to strictly apply the rules alluded to above in dealing with excess without a completed re-survey of the district, as excess was almost universal and was very often quite unobjectionable. Those rules were, therefore, held in abeyance. Greater latitude was given to the settling officer, and advantage was taken of the opportunity to re-organize and improve the land revenue administration in many other particulars.

Modus operandi of Settlement.

26. The foregoing sketch explains the necessity which existed for a settlement and indicates the points mainly to be dealt with. Mr. Puckle's letter to the Board of Revenue and his instructions to the settling officer, which were approved in G.O., No. 453, dated 16th March 1881, deal with those points in detail. The following is a brief sketch of the *modus operandi* adopted at the settlement:—

(1) Each nád, or division, was sub-divided into villages of convenient size for administrative purposes, natural or well known boundaries being adopted as far as possible, and due regard being paid to area, population, revenue and such like matters. The four náds were thus split up into thirty-six villages, the names and areas of which are given in Statement I attached to this report.

(2) A map of the village was then obtained from the survey department and the fields were numbered consecutively.

(3) With this map and the survey registers relating to the lands in the village, a subordinate was sent to the village, and, with the assistance of the revenue officials, he made a preliminary inquiry into all matters in dispute connected with the survey or settlement, and with the registration of transfers of puttas, applications for land, improper inclusion of forests in private holdings, statistics of cultivation, &c.

(4) On his return to office he reported particulars of each matter to me and received orders on doubtful cases which required no inspection of the land or further inquiry. The matters requiring inspection or further inquiry were noted by me, and then the village was inspected by me in detail. Grants of land applied for under Settlement Rules 10 and 16 were disposed of, or, if necessary, reported to the Collector or Government. Village grazing lands were selected and set apart under Rule 11. Reserves for roads, streams, swamps and forests, not previously made, were selected and recorded. Lands "available for sale" under Rule 13 were also selected and recorded. Lists of new demarcations required, owing either to omissions or errors in the original surveys, were prepared, and the necessary detailed orders were sent to the Survey officer for execution. Government lands claimed without title were inspected and the necessity (or otherwise) of resisting the claim was considered. Where valuable forests were included in private holdings the rights of Government were asserted, and where large excess areas were included and there appeared no objection to the occupation of lands, a putta was issued on such terms as to future assessment and payment of arrears or penalty as was considered reasonable, the Collector being consulted in all important cases. Inam lands were dealt with in accordance with G.O., No. 212, dated 11th February 1884.

(5) All the above points having been settled, and the new surveys having been made, a general register of all the lands in the village was framed, showing not only all private holdings with the area, rate of assessment and total assessment payable thereon and the tenure on which held, but also showing all Government lands ranged under their appropriate heads as reserved forest, swamp, road, stream, grazing ground, "available for sale," &c. The distinction between lands registered in the Collector's office and in the Curnam's was abolished, and *all* the lands (including many which had previously escaped registration altogether) were entered in the one village register.

(6) Brief descriptive memoirs of each important estate (Settlement Rule V) were then prepared in communication with the proprietors.

(7) From the general register the chittah (or individual ledger) was prepared, showing for each land-owner in the village the several lands held by him, and he was furnished with a copy of this, under the name of the settlement rough putta, and asked to bring to notice any errors or omissions within a fixed time.

(8) After all appeals had been heard, the maps and registers were finally revised, abstract statements prepared, a descriptive memoir and register in diglott written up and sent to be printed with an eye sketch (Settlement Rule IV) of the village bound up with the register.

(9) The map of the village, numbered to correspond with the register, and prepared on the scale 16 inches = 1 mile, was then sent to the Survey office to be lithographed and sold to the public. The memoir and register, on being printed, was also made available for sale to the public and was supplied, with a copy of the map, to all the public offices of the district.

Contents of Settlement Register and Memoir.

27. The memoir and register, as printed, contain for each village the following matters:—

(1) A note as to the situation and boundaries.
(2) A statement of the areas included.
(3) Some statistics of demarcation marks.
(4) Some statistics of the population, number of houses, of puttas and of cattle.
(5) A statement of the area actually cultivated with various kinds of crops.
(6) A note showing the total increase of assessment by the settlement accounts.
(7) A descriptive memoir of each important estate, showing its position, the lands included in it, the history of their acquisition, the areas of the crops cultivated, the former and present owners and the assessment.
(8) A list of all demarcated and reserved forests, with their position and areas, and names, if any.
(9) A similar list of all demarcated and reserve swamps.
(10) A rough eye sketch of the village indicating its boundaries and the chief hamlets, roads, streams, estates, and grazing grounds in it.
(11) The general field register, showing the number and name of each field, its rate of assessment, area and total assessment, and the name of the owner, with remarks as to the tenure on which it is held, or, if Government reserve, the purpose for which it is reserved.
(12) An abstract showing the areas occupied as free-hold or subject to each rate of assessment, the grants made at settlement, the various areas reserved as forest, grazing ground, &c., and the areas available for sale, &c.

Revision of the Village Establishments.

28. These accurate and elaborate registers and accounts would lose much of their value unless arrangements were made to revise them each year and keep the current accounts up to date. It has been noted that the district had completely outgrown the subordinate establishments allowed for the management of its land revenue and cognate affairs. In fact no adequate village establishments existed. I, therefore, at the Collector's request, drew up a complete scheme for a revision of the village establishments. This was sanctioned with but little alteration by the Government, and I, then, at the Collector's request, submitted lists of persons who might suitably be appointed to the various offices (over 100 in number). The scheme is now in full operation and for the first time in the history of the district it may be considered that the arrangements regarding the staff of village officials are on a satisfactory footing. Provision for their pay has been made by the introduction of the Village Service Cess under the authority of Act IV of 1864, extended by Act I of 1883, specially passed in that behalf, and also, to a small extent, from the proceeds of the inam lands previously assigned for the purpose The village officers are now entrusted with the collection of all the land revenue, the Collector's office being relieved of that portion of the work which had hitherto devolved on it.

Grants at Settlement.

29. Some of the operations enumerated in paragraph 26 above are of such importance as to require some further notice. The grant of land at settlement, in accordance with Settlement Rules 10 and 16, is one of the most important features of the settlement and has done more than anything else to render the settlement generally acceptable to the people of the district. A full examination of the working of these rules and the proof that their application is financially profitable to Government as well as agreeable to the people is contained in the papers recorded in G.O., No. 1205, dated 28th September 1883. The areas granted in each village, with the assessment payable thereon, are shown in Statement No I, attached to this report. The grants made to estates, at Rs. 2 per acre, amounted to 4075·38 acres, assessed at Rs. 8,150-12-1. The grants made to native puttadars, at As. 10 per acre, amounted to 4376·13 acres, assessed at Rs. 2,735-4-2. The total grants were, therefore, 8451·51 acres assessed at Rs. 10,886-0-3. The grants thus made exceed the areas sold under the Waste Land Rules during the past *sixteen years.* The total number of the grants was 980, and the average area of each grant was 9·62 acres. Every individual grant was inspected by me in person to see that it included no forest and was otherwise free from objection. This precaution, though laborious, was shown by the past history of the district to be absolutely necessary.

Forests.

30. Great attention was paid to the registration of blocks of forest as reserved, and, where it appeared likely that grass lands between, or adjoining, forest blocks were likely to be required for reservation, they were registered accordingly pending final selection of reserves under Act V of 1882 by the Forest officers. The number of fields which are shown in the registers as demarcated and reserved as forest is 1,243, and the total area is 51,492·79 acres. Many of these fields, however, are contiguous to each other, though for various reasons they have been separately demarcated. Thus the area of each block of forest is much larger than would appear from consideration of the average size of each field registered as reserved forest.

Lists of all the lands so registered were sent to the Forest Officer on the completion of the settlement of the village. In villages with large tracts of unsurveyed forest and waste, the forests were not separately entered in the registers, as there was no means of defining them, nor was there any advantage in attempting to do so pending selection and demarcation by the Forest officers under Act V of 1882. Such tracts, therefore, are not included in the above figures. Statement No. 4 shows the demarcated areas reserved in each village.

Village and other Grazing Lands.

31. As required by Settlement Rules 11 and 12, village grazing grounds were also selected and set apart in each village according to its requirements and the area still available for the purpose. Each block selected was personally inspected by me. Altogether 319 blocks were so set apart, with an area of Acres 24061·24. If the Government reserves for Todas' cattle (1890·74 acres), the reserved swamps (1842·02 acres), and the recreation, and grazing grounds of Ootacamund (4579·44 acres) be added, the total permanently demarcated as pasture land amounts to 32373·44 acres for the 36,746 cattle of the district, or nearly one acre per head. It must be noted that the areas registered as "available for sale" (18366·40 acres) are used as pasture pending their gradual occupation, and in the villages with large unsurveyed tracts grazing lands have not yet been fully selected pending the final selection of forest reserves. There is thus more than enough grazing land for all wants for years to come in the district as a whole, though in certain localities the want of pasturage is keenly felt owing to the extension of population and cultivation. The area demarcated as village grazing land in each village is shown in statement No. 4.

Lands "available for sale.".

32. The statement shows the demarcated areas available for sale in each village. They are 859 blocks in all and aggregate 18366·40 acres. The reserved lands in Ootacamund and Coonoor are simply registered as "Government waste" not as "available for sale," since Government has recently imposed stringent restrictions on the disposal of such lands even under the Waste Land Rules. Such lands are 132 in number with an area of 868·02 acres. Lands available in the unsurveyed tracts are not included in the above, since there is no means of defining them. Each block entered as available for sale was inspected by me in person to ascertain that no objection existed to such classification.

Estates.

33. As many as 248 estates have been separately described in the memoirs. The area of these estates is 41415·36 acres and the assessment Rs. 40,565-11-0.

Transfers of Puttas.

34. The registration of transfers of ownership had from various causes been much neglected, and, in consequence, the registers of owners did not at all generally correspond with the actual facts. Much inconvenience to the Revenue officers and to the land-owners was the result, and collections were impeded. At settlement nearly 3,000 transfers were registered and the accounts of ownership were thus rendered much more accurate than they have hitherto been.

Increase in Occupied Area and Financial Results.

35. Statement No. I shows the increase in the occupied area and assessment of the district due to survey and settlement. Puttas for the survey areas in Merkunad and in the three settlements of Ootacamund, Coonoor and Kótagiri were issued by the Collector prior to settlement, and it has not, in consequence of the state of the revenue accounts before settlement, been practicable to show the results for each village of Merkunad separately, but this has been done in all the other villages. Looking at the totals, it will be seen that the accounts prior to survey and settlement show only 64150·23 acres as occupied, with an assessment of Rs. 33,632-7-7; while according to the settlement accounts the occupied area (excluding free-holds) is 126941·93 acres, assessed at Rs. 85,045-9-6. Of this enormous increase, however, 8451·51 acres, assessed at Rs. 10,886-0-3, is due to new grants made at settlement, and 5901·55 acres, assessed at Rs. 5,599-11-11, is due to sales under the Waste Land Rules and gold mining grants made during the course of survey and settlement and which of course are not due to those operations. Deducting these items from the total increase, we find that the net increase revealed by the survey and settlement of the district is 48438·64 acres, assessed at Rs. 34,927-5-9.

The increase in occupation is 75·5 per cent., and is mainly due to the existence of the "*Bhurty*" privilege (see paragraphs 8, 9, 14 and 21) and the practical recognition at survey of claims under it, and to the illicit extension of the privilege and the malpractices (see paragraph 22) which took place under its shadow. It is also due, in a smaller degree, to excess demarcations in Todamunds and to the registration of lands previously omitted altogether from the revenue accounts. The increase in assessment is 103·8 per cent., and is due to the same causes, and the operation of Settlement Rule 18 in regard to fraudulent misappropriations of land, and to the introduction of puttas into Kinnakorai village in place of the "*Erkâdu Kothu Kadu*" system (paragraph 15) previously in force, and to some small revisions sanctioned in regard to old rates of assessment containing fractions of an anna. If the grants made at settlement be added, the total increase due to survey and settlement is 56890·15 acres, assessed at Rs. 45,813-6-0, and the percentages of increase are raised to 88·7 and 136·2, respectively.

Average Rate of Assessment of all Lands.

36. Where the increase in the assessment is so great, it is natural to turn to the table of rates in force and to inquire whether the present rates are excessive. Statement No 2 contains the required information. Taking all the lands in the district together, we find that the average rate is As 10-8 pies only. This, however, includes the house-sites in the towns of Ootacamund and Coonoor, assessed at Rs. 10 and Rs. 4 per acre, and the gold mining grants, assessed at Rs. 5 per acre, and all the estates, lease lands in Ootacamund and Coonoor, and settlement grants, which include all the higher rates of assessment.

Average Rate of Assessment on Lands of Hill Tribes.

37. The lands held by the Badagas, Kotas, Irulas, Kurumbas and Todas, who alone constitute the hill tribes, are assessed without exception at the low rates sanctioned in 1862 and which vary from 10 annas to 2 annas. The average assessment on these lands, excluding the new grants made at settlement, is only a fraction over six annas per acre; and the avidity with which these tribes sought for settlement grants at the *highest* rate prevailing in their puttas 10 annas (viz. per acre), together with the fact that they actually took up 4,376 acres at that rate, shows that the assessment on their remaining lands is not excessive. It is in fact much the same rate as prevailed in the beginning of the century under Major McLeod's settlement. In 1835, Mr. Sullivan estimated the average assessment at 6 annas per acre, and remarked that this, "which was in former times as much as the land could afford to pay, has become, under the improved circumstances of the people, little more than a quit-rent."

If further proof were required, it will be found in the fact that, though the settlement rates have been introduced in each village on the completion of its settlement, the area relinquished has been only 240 acres in the past three years, and no less than 188 acres of this consisted of lands newly granted at settlement.

No further Revision of Rates required.

38. If then these rates are so moderate and have not been changed since the beginning of the century, the question at once suggests itself: Ought they not to be revised and increased? In dealing with this question it must be distinctly borne in mind that there has never been a settlement of the Nílgiris in the modern and technical sense of the term, with a scientific classification of soils and an adjustment of rates in accordance with the productive capabilities of the soil. The settlement of Major McLeod in 1800-1, indeed, professed to be such, but it was obviously very rough and ready and referred, at best, to only a small part of the area now occupied. Mr. Grant's settlement of 1862 professed to be rather a settlement of areas than of rates. The object was to abolish the "*Bhurty*" system and to make a general reduction, in a rough and ready way, *on all rates*, so as to compensate the hillmen for the loss of their ancient privilege. The present settlement, too, proceeds on the bases of the former assessments, and has made no attempt at a general classification of soils. The question is whether such a classification is now required or would pay for the cost of making it. I trust I shall be excused if, with my experience of the district, I record my decided opinion that it is not at present required and probably will not be expedient for many years to come. The more valuable lands are for the most part held under special leases or deeds which cannot be interfered with. The rates fixed on the grants at settlement should not be altered for at least thirty years. The assessment on the estates purchased from Badagas, Kurumbas and Irulas, almost without exception contained large areas of Government land wrongfully included with the estate at survey. In these cases, and in lands held without any title prior to settlement, an appropriate rate has been fixed. As regards the lands held by the native tribes, though the rate is only a little over six annas per acre, it is, in my opinion, sufficient, all things considered. It must be remembered that though the *rate* per acre has not been increased, yet now, for the first time, will these tribes be in reality required to pay for all the land in their occupation. The "*Bhurty*" privilege was never really abolished until the survey and settlement, and the *total* payments hereafter to be made by the hillmen will be nearly *double* the total hitherto paid by them. The fact, too, that they *do*, and for many long years most certainly *will*, cultivate only a portion of their holding each year, leaving the rest fallow to recover its fertility, causes the assessment on the area actually cultivated each year to be much greater than the average rate on the holding. Probably it almost doubles it. The assessment on the fallow portion has to be paid out of the produce of the cultivated portion.

Inequalities of assessment no doubt exist, but my experience does not lead me to think them, on the whole, to be very important or such as would justify the expense and harassment inseparable from a regular settlement.

Statistics showing development of District.

39. A few words of comment on the figures in Statement No. 3 will be of interest as showing the development of the district and its increased capability to bear the increased assessment that is now fixed on it. And, first, as to population—This was put down at 2,516 in the Survey Report of 1812. In 1821 Captain Ward fixed the population at 4,353. In 1847 Captain Ouchterlony found it to be 17,087. In 1866 it was believed to be 38,142. The first regular census was taken in 1871 and fixed the population at 49,501. The census of 1881 showed that it had

risen to 65,591, but a small part of these increases is due to the transfer of the Manaar Slopes from Coimbatore in 1877, and of Kinnakorai from Malabar in 1881. All the Hill tribes, but most especially the Badagas, the chief cultivators, participate in the increase. The Todas are not dying out, as is sometimes assumed, but have remained almost stationary for the past twenty years. The increase in the number of houses, which is now 16,114 against 13,922 in 1871, corresponds with the increase in population. The average for each house (between four and five souls) shows that there is none of that over-crowding which so often indicates poverty. Indeed it is unquestionable that the neat and substantial houses of the Badagas are superior, in size, cleanliness and comfort, to the average houses of the cultivators in the plains. With the population it is natural that the number of the puttas should have increased, and it now stands at 5,557. The number of cattle has almost doubled since 1871, and the area actually under cultivation has risen, since that date, from 49,613 acres to 60,395 acres.

Cost of Settlement.

40. The total expenditure on the Settlement Party has been Rs. 81,369-15-8. I have no figures of the cost of survey of the settled portion of the district, but, no doubt, they exist in your office. The total annual increase due to survey and settlement is shown in paragraph 35 to be Rs. 45,813-6-0. The penalties imposed by the Collector under settlement Rule 18 and the arrears of assessment on lands previously omitted from the accounts but reported to the Collector by this office, amounted to nearly Rs 40,000, a sum sufficient, in itself, to pay for one-half of the total cost of the settlement. In considering the cost of settlement, I also think that a deduction of, say, one-third of my salary, from 1st July 1882 to end of January 1883 and from 1st May 1883 to end of September 1883, or one year in all, should be made on account of my employment during those periods as Secretary to the Local Self-Government Committee and to the Committee appointed to prepare drafts of new Municipal and Local Fund Boards' Bills, as this special work occupied about one-third of my time during its continuance.

Résumé of Results, financial and general.

41. The financial results of the survey and settlement have been detailed in paragraphs 35 and 40. The general results have also been indicated, from time to time, in this report. They may be summed up as follows: All private holdings have been defined, mapped and registered. Every man now knows his own, and can have a plan of it for a few annas The long pending disputes between Government and landholders as to their boundaries have been settled. Large areas of forest, wrongfully claimed, have been recovered for Government, and titles (so far as puttas are titles) have been granted for the areas admitted at settlement to belong to claimants, thus rendering their properties more valuable and more marketable. Considerable areas have been granted to private persons under the Settlement Rules, to their no small satisfaction and the increase of the public revenues. The land revenue accounts have been thoroughly revised, and efficient village establishments have, for the first time, been organized to keep the accounts and attend to the collection of the revenue and other cognate duties. The areas available for sale in the demarcated portions of the district have been registered, so that both the public and the district officers can know them merely by examining the maps and registers. In like manner all the lands reserved as forest, swamp, road, stream, &c., and the areas set apart as village grazing grounds in the demarcated portions of the district have been defined and recorded, both on the ground and in the maps and registers. These measures will, it is believed, both benefit the population of the district and greatly facilitate the transaction of work in the Collector's and in other public offices. I trust that the results of the survey and settlement, both financial and general, may meet with the approval of Government.

Aid given by Survey Officer.

42. During the settlement a large number of new demarcations and surveys were necessary, and, in examining alleged titles to estates, it was often necessary to obtain old maps and survey records. I was, therefore, under the necessity of constantly applying to the survey officer for assistance. All my demands (often troublesome enough) met with the most prompt and courteous response from Colonel C. A. Liardet, the Deputy Superintendent of Revenue Survey, and his subordinates.

Services of Subordinates.

43. My own subordinates worked most industriously and willingly, under circumstances sufficiently trying. The field hands suffered much from fever and other effects of climatic exposure. One died at his post. Another had to resign the public service owing to broken health, and all suffered more or less. The Supervisors, T. Seshaiah and C. Kristnama Charry, performed their laborious duties most efficiently.

Ambil Narayana Iyengar, the English Head Clerk, by his quickness and intelligence in performing all works entrusted to him, has been of the greatest possible assistance to me, and I trust that you will be able to give him suitable promotion when his services are no longer required by the Forest Settlement Officer. I have much pleasure, too, in acknowledging the great aid given to me by the Collector's Head Clerk, S. Ramasami Iyer, in dealing with the old quit-rent lands of Ootacamund and Coonoor, a most intricate and difficult task.

Endorsement by W. WILSON, Esq., Director of Revenue Settlement and Agriculture, dated 15th December 1884, No. 3544.

Submitted to Government through the Board of Revenue.

2. The Director fully endorses the Collector's remarks regarding the value of the settlement and the admirable manner in which it has been conducted by Mr. Benson.

3. The work was begun on the 1st April 1881 and was completed on the 31st October 1884. It was originally estimated that it would be completed in two years; it actually occupied three-years-and-a-half. The original estimate was, considering the difficulty of much of Mr. Benson's task, requiring as it did much patience and tact, probably too sanguine, but the settlement would have in all likelihood been completed much earlier, but for Mr. Benson's employment in addition to his settlement duties as Secretary to the Committee on Local Self-Government and in connection with the draft of the new Local Fund and Municipal Acts.

4. Mr. Benson's report will hardly bear condensation, but the financial results of the settlement are briefly these:—The recorded area of occupation has been raised from Acres 64,150 to Acres 126,942, or by 98 per cent., and the assessment from Rs. 33,632 to Rs. 85,045, or by 153 per cent.

5. The cost of the operations has been, for demarcation and survey, Rs. 7,96,801, and for settlement, Rs. 86,793, or Rs. 8,83,594 in all.

6. Mr. Benson suggests that a portion of his salary for the time that he was employed on the additional duties noted above should be credited to the settlement, but no adjustment of the kind seems called for.

Resolution—dated 10th March 1885, No. 805.

Submitted for the information of Government.

2. In the report forwarded by the Director, Mr. Benson, after giving a brief sketch of the several attempts made from time to time to systematize the settlement of the various kinds of holdings on the Nílgiris, proceeds to afford full information in regard to the instructions under which his operations in the district were commenced in 1881, the manner in which they have been carried out and the general results of his work.

3. Financially the outcome, as stated by the Director, is an increase in the amount of the annual assessment * of Rs. 51,413, or 153 per cent.; while the recorded † area of occupation is increased by 62,792 acres, or 98 per cent. Mr. Benson, however, explains, at paragraph 35 of his report, that from these totals Acres 14,353 ‡, assessed at Rs. 16,486, should be deducted as not properly appertaining to the result of settlement operations proper. Omitting these areas, the net increase is Acres 48,439, assessed at Rs. 34,927. As the cost of the settlement (exclusive of any part of Mr. Benson's salary) is Rs. 8,83,594, the result is equivalent to a rate of interest of 3·9 per cent. on the outlay. At the same time, it should not be lost sight of that considerable areas were formerly excluded from the taxable extent of holdings, on the ground that they were uncultivable slabs of rock. Such unprofitable patches were provided for in Rules 85 and 86, of the Madras Revenue Survey Manual, 1874, and treated on those principles in the Coimbatore Revenue Settlement Report, No. 237-104, dated 1st September 1875, page 36, paragraph 8; but no allusion is made thereto in Mr. Puckle's rules in G.O., of 16th March

		RS.
* Before settlement...		33,632
At present ..		85,045
	+	51,413

		ACS.
† Area before settlement ...		64,150
Present area		126,942
	+	62,792

	ACS.	RS.
‡ New settlement grants.	8451·51	10,886
Waste land sales and mining grants ...	5901·55	5,600
Total ...	14353·06	16,486

1881, No. 453, or in Mr. Benson's report under review, though the inclusion of all such unprofitable patches, without allowance either for area or quality of soil, must have been an important factor in contributing to swell the areas and assessment to nearly double what they were before.

4. The settlement which has now been completed has been conducted, not upon the usual method of classification of soils with reference to their power of production, but under rules drawn up by Mr. R. K. Puckle and approved by Government * as well adapted to the circumstances of the Nílgiris. Towards the close of his report, Mr. Benson, after explaining the effect of the present settlement upon the assessment payable by the land-holders, offers his opinion (page 38) regarding the introduction of a more scientific settlement at some future date. He gives reasons for considering that the present settlement should remain in force for thirty years at least, and in this opinion the Board entirely concur. As pointed out by Mr. Benson, the more valuable lands are for the most part held on special leases or grants, and while the holdings of the hill tribes have been re-assessed nominally at the same average rate (6 annas an acre) as before settlement, the effect of re-assessment in this case, by necessitating payment for every acre held, will be greatly to enhance the amount heretofore paid by these tribes.

* G.O., dated 16th March 1881, No. 453.

5. The Board agree with the Collector and the Director in their opinion regarding the satisfactory character of Mr. Benson's work.

(True Copies and Extract.)

(Signed) E. GIBSON,
Secretary.

To the Secretary to Government, Revenue Department.
Copy to the Director of Revenue Settlement and Agriculture.
" " Collector of Nílgiris.

Order—dated 20th April 1885, No. 449, Revenue.

Land Revenue, No. 54.

The Government consider the result of the settlement of the Nílgiri district as satisfactory in every respect, and they cordially recognize the tact and ability with which the operation has been conducted by Mr. Benson. The financial results are encouraging, but these are of minor importance as compared with the general effect of the settlement as summarized in paragraph 41 of Mr. Benson's report. The demarcation and accurate record of private holdings and of land at the disposal of Government, the revision of the land-revenue accounts, and the organization of an efficient village service are so indispensable to the general prosperity and to a satisfactory administration of the land revenue that the outlay on settlement could not have been regarded as otherwise than a profitable investment even if it had not brought in a direct financial return.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture,
with four enclosures returned.

Exd. W. H. French.

80 Copies.

Govt. of {1885} Madras.

REVENUE.

Issued

Recd. *Encl.*

G.O., 20th April 1885, No. 449.

APRIL.

Settlement

of the Nilgiri district.—Considering the result of the — satisfactory, and cordially recognizing the tact and ability with which the operation has been conducted by Mr. Benson.

No. 1314

ated to the Officers in charge of Settlement Parties.

Rev. Sett. & Agre.
27 May 1885.

(By Order)

1st. Assistant

Dy Director of Rev: Sett.
No 3 Party.

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948

16th May 1885, No. 578, Revenue.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following G.O., dated 30th April 1885, Mis. No. 808, Financial:—

Read—the following letter from the Secretary to the Government of India, Department of Finance and Commerce, to the Chief Secretary to Government, dated 17th April 1885, No. 269:—

I am directed to acknowledge the receipt of your letter No. 501, dated the 9th March 1885, requesting that it may be ruled that fixed tentage may be drawn by an officer ordinarily entitled to it when employed on temporary or special duty for a period not exceeding six months.

2. This condition was suggested by the Government of Madras when the present scale of tentage and travelling allowances drawn by Madras officers was fixed, but the Government of Madras expressed its willingness to waive it in the expectation that such cases would occur rarely, and accordingly no such rule was sanctioned. It is now stated that the deputation of officers on special duty is by no means rare and it is requested that the hardship of refusing tentage to an officer so deputed and who still maintains his equipment of tents may be removed.

3. I am directed to say that the Governor-General in Council is pleased to rule that officers on deputation shall in this respect be placed in the same position as officers on privilege leave, that is, that an officer on deputation shall be entitled to draw fixed tentage, provided the deputation does not last for more than three months, and provided also that the officer acting for him shall draw only the tentage of his own rank.

Order—dated 30th April 1885, Mis. No. 808, Financial.

Communicated to the Revenue Department.

(True Extract.)

(Signed) M. HAMMICK,
Ag. Under-Secretary.

To the Revenue Department.

Order—dated 16th May 1885, No. 578, Revenue.

Miscellaneous.

Communicated to the Board of Revenue, the Director of Revenue Settlement and Agriculture, the Superintendent of Revenue Survey, the Inam Commissioner, and the Director of the Government Cinchona Plantations, Parks and Gardens.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Superintendent of Revenue Survey.
,, the Inam Commissioner.
,, the Director of Government Cinchona Plantations, Parks and Gardens, Nílgiris.
,, the Accountant-General.

Exd. W. H. French.

70 Copies.

Govt. of {1885} Madras.

REVENUE.

Issued

Recd.

Encl.

G.O., 16th May 1885, No. 578.

MAY.

Fixed Tentage.

Ruling of the Government of India regarding — to an officer on temporary or special duty, communicated to the Board of Revenue and other officers concerned.

No. 1607

Communicated to the Officers in charge of Settlement Parties, the Agricultural Reporter to Government and the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 5th ~~May~~ June 1885.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No III
„ „ Special Assistant Collector, Nilgiris and Malabar.
„ „ Agricultural Reporter to Government.
„ „ Inspector of Cattle Diseases.

RECEIVED
27 JUN 85

Reps No. 15

Revenue department

Proceedings of the Madras government

Read the following

9350

GOVERNMENT OF MADRAS.

MILITARY DEPARTMENT.

June 1885, No. .

Furlough.

Read the following papers :—

No. . *From Brigadier-General GODFREY CLERK, Adjutant-General, to Lieutenant-Colonel A. KENNEY-HERBERT, Officiating Secretary to Government, Military Department; dated Ootacamund, 11th April 1885, No. 771-O. (Leave).*

With reference to the accompanying copy of a letter from Lieutenant-Colonel H. S. Court, Staff Corps, Superintendent of Police, Trichinopoly, I am directed to request you will be good enough to take the necessary steps to ascertain from the Government of India the authority under which note 3 has been added to Rule XXXIII, Furlough Regulations of 1868, as published in the supplement to the Bengal Army List, dated 5th July 1884, this office having received no intimation that officers employed in the police and others in civil employ, who have been refused permission to revert to military duty, are eligible for leave in India under chapter II of those regulations.

No. . *From H. F. CLOGSTOUN, Esq., Accountant-General to the Government of Madras, to Lieut.-Colonel A. KENNEY-HERBERT, Officiating Secretary to Government, Military Department; dated Fort St. George, 21st April 1885, No. 1049.*

In forwarding letter from the Adjutant-General, No. 771-O. (Leave), dated the 11th April 1885, requesting Government to ascertain from the Government of India the authority under which note 3 has been added to Rule XXXIII, Furlough Regulations of 1868, as published in the supplement to the Bengal Army List, dated 5th July 1884, I have the honor to state that when, at the instance of Major D. Heming, I raised this question, the Adjutant-General in his letter, No. 1141-O. (Army List), dated 6th November 1884, informed me "that the appendix to the Quarterly Army List in which are published the furlough rules, &c., is, as is notified in the fly-leaf of the appendix, a *non-official* supplement, and is, therefore, no authority on the matters referred to therein."

2. I have received no official intimation from the Government of India of the application of the rules in chapter II of the Military Furlough Regulations of 1868 to officers employed in the police.

No. . *To the Secretary to the Government of India, Military Department; dated 24th April 1885, No. 2190.*

No. . *From Colonel G. CHESNEY, Secretary to the Government of India, Military Department, to Lieutenant-Colonel A. KENNEY-HERBERT, Officiating Secretary to the Government of Madras, Military Department; dated Simla, 15th May 1885, No. 402-A.*

Furlough.

No. 2190, dated 24th April 1885.
* Proceedings of Madras Government, No. 237, dated 13th January 1876.

I am directed to forward, for the information of the Governor in Council, the accompanying copy of Military department letter, No. 1003, dated 17th July 1882, and in reply to your letter noted on the margin to refer you to the above letter and No. 21-A., dated 4th January 1876 * as the authority for the insertion of note 3 to Rule XXXIII of the Furlough Regulations of 1868, under which officers in the police and certain others holding civil appointments are considered eligible for general leave in India.

From the Officiating Secretary to the Government of India, Military Department, to the Secretary to the Government of Bengal, Appointment Department; dated Fort William, 17th July 1882, No. 1003-A. (Furlough.)

Adverting to my letter, No. 821-A., dated the 1st June 1882, and with reference to your No. 2065-T. A., dated the 28th idem, I am directed to state, for the information of the Honorable the Lieutenant-Governor, that the Government of India having reconsidered the case of Colonel W. Gordon, Bengal Staff Corps, District Superintendent of Police, are of opinion that, as that officer cannot be allowed to resign his appointment and revert to military duty, there being no suitable military employment available for him, he may be admitted to the benefits of the decision in this office letter, No. 21, dated 4th January 1876.

2. The six months' leave in India applied for by Colonel Gordon may therefore be sanctioned and notified in His Honor's orders as under Rule XXV of the Military Furlough Regulations of 1868.

No. . ORDER THEREON, June 1885, No. .

Ordered that the foregoing letter from the Government of India be communicated for the information of His Excellency the Commander-in-Chief, and the correspondence furnished to the several departments of the Government Secretariat, in continuation of Proceedings of Government, No. 237, dated 13th January 1876.

(True Extract.)

(Signed) A. KENNEY-HERBERT, Lt.-Col.,
Offg. Secretary to Government.

To the Adjutant-General.
,, Public, &c., Departments.
,, Revenue Department.
,, Public Works Department.
,, Controller of Military Accounts.

Order thereon 15th June 1885 No 3047
Recorded.

(True Extract)
Sd/ W. Wilson
Ag. Secretary to Govt.

Exd. E. C. Shunker.

To
the Board of Revenue
Director of Rev. Settt & Agr.

Inns 1620/85

Govt. of {1885} Madras

MILITARY.

To

THE ADJUTANT-GENERAL,
&c., &c., &

Cop of the Madras Govt. O.D.
of 15th June
No. 3047

Dated June,

Issued

Recd. *Encl.*

G.O., June 1885, No.

JUNE.
Nos.

Furlough.

Correspondence regarding the eligibility of officers in the police, &c., for general leave in India, communicated to His Excellency the Commander-in-Chief and the departments of the Secretariat.

No 1794

Communicated to Col. C. J. Stuart, Dy Director of Rev: Settlement Party No 3, Madura.

Fred Nicholson

Ag: Director of Rev: Settt and Agriculture

22d June 1885
Madras

To
Col. C. J. Stuart.

RECEIVED
28 JUN 85

Rep Dir 16

1st June 1885, No. 639, Revenue.

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952

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—again G.O., dated 12th May 1885, Mis. No. 2421, Revenue :—

Read—the following G.O., dated 9th May 1885, No. 845, Financial :—

Read—the following letter from the Secretary to the Government of India, Department of Finance and Commerce, to the Chief Secretary to Government of Madras, dated Simla, 29th April 1885, No. 552 :—

The expenditure which the Government of India has found it necessary to sanction on military preparations is likely to impose so severe a strain on the finances, that the adoption of special measures for the reduction of expenditure of all kinds, and for the prompt realisation of the public revenue, cannot with safety be delayed longer.

2. The Government of India is at present considering what reductions can be made in ordinary Imperial expenditure, as well as in Capital outlay on works of public utility, and special orders will shortly be issued on the subject.

It is, however, of immediate importance that the various Local Governments and Administrations should also consider what measures may now be feasible for suspending all optional expenditure, including both Provincial expenditure and Imperial expenditure directly administered by Local Governments. It would also be a considerable assistance to the Government if it were found possible to postpone for a time expenditure from Local Funds, the balances of which are kept in the Public Treasury. The Government of India does not, however, desire that there should be any undue interference with the legitimate authority of local bodies over funds appropriated by the legislation for specific purposes.

3. It is necessary that all proposals for increases of salaries or of establishments, or for additional expenditure of any kind, should be narrowly scrutinised at the present moment. The Governor-General in Council is not prepared to say that no additional expenditure of any kind should be proposed or sanctioned; but it is obvious that at a time when reductions are being enforced, proposals for additional expenditure can only be justified by very special causes.

4. The largest retrenchments at a time of pressure can usually be attained by a restriction of the expenditure on Public Works. Without wishing to impose any sudden check on the progress of Public Works which would be calculated to cause serious permanent loss, His Excellency in Council must, in the present position of the finances, press on the attention of local authorities the necessity of taking into their immediate consideration material reductions in their Public Works expenditure.

5. It is with regret that the Government of India has found itself compelled to call on Local Governments to restrict expenditure from the funds which have been placed at their disposal for carrying on and improving the administration of the country, but the present state of the cash balance and the prospects of expenditure in

ensuing months leave no option in the matter, and the Governor-General in Council is satisfied that he can count on the cordial and loyal co-operation of all Local Governments and Administrations.

6. The Government of India will be glad to receive a report, not later than 10th June, from each Local Government of Administration, stating what reductions, immediate and prospective, have been found possible in each case.

If peace should be maintained, the Government of India will take the earliest opportunity of removing the restriction on Provincial and Local expenditure; but if, unhappily, war should break out, further and more stringent measures must be taken hereafter for improving the balances and revenues at the disposal of the Government of India.

Ordered that copies of this resolution be sent to the various Local Governments and Administrations, and to the several departments of the Government of India.

(Signed) D. BARBOUR,
Secretary to the Government of India.

Order—dated 9th May 1885, No. 845, Financial.

Communicated to all departments of Government in view to orders being issued to stop immediately all expenditure which is not absolutely necessary in the interests of the public service.

2. The Government will not entertain proposals for increase of salaries or establishment unless real urgency can be established, nor will applications for loans to local or municipal bodies be sanctioned, unless the objects for which they are sought cannot be postponed.

3. Reports with reference to the sixth paragraph of the resolution of the Government of India should reach Government, in the Financial Department, not later than the 31st instant.

(True Extract.)

(Signed) E. F. WEBSTER,
Chief Secretary.

To the Public Department.
,, Judicial ,,
,, Financial (Local Fund and Municipal) Department.
,, Marine Department.
,, Ecclesiastical Department.
,, Educational ,,
,, Political ,,
,, Revenue ,,
,, Military ,,
,, Public Works ,,
,, ,, ,, (Irrigation).
,, ,, ,, (Railways).
Copy to Accountant-General.

Order—dated 12th May 1885, Mis. No. 2421, Revenue.

Communicated to the Board of Revenue and all Heads of Departments under the Revenue Secretariat.

2. Orders stopping at once all expenditure which is not absolutely necessary in the interests of the public service, and directing the submission, so as to reach the

Government office by wire if necessary not later than the 25th instant, of a report stating what reductions, immediate and prospective, are possible, will be issued by telegram.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Superintendent, Revenue Survey.
,, the Inam Commissioner.
,, the Director, Government Cinchona Plantations, Parks and Gardens, Nilgiris.

Read—the following telegram from C. F. MacCARTIE, Esq., Acting Sub-Secretary to the Board of Revenue, to the Secretary to Government, Revenue Department, dated Madras, 23rd May 1885:—

Board propose following reduction:—Public Exhibitions, Rs. 16,000; Civil Buildings, Rs. 37,000; Minor Irrigation, Rs. 1,25,000; Salt, Rs. 3,50,000; Forest, Rs. 1,00,000—total Rs. 6,28,000. Proceedings follow.

Read—the following Proceedings of the Board of Revenue, dated 23rd May 1885, No 1536, Press:—

Read—again the following Proceedings of the Board of Revenue, dated 13th May 1885, Mis. No. 4447:—

Abstract.—Calling for a report by the 20th instant as to what reductions are feasible in the Settlement, Forest, &c., Departments.

Read—again the following Proceedings of the Board of Revenue, dated 19th May 1885, No. 1481:—

Abstract.—Communicating, with instructions, Government Order, Financial Department, impressing on all departments the need for practising the strictest economy in expenditure in the present times.

Read—also the following Proceedings of the Board of Revenue, dated 22nd May 1885, Mis. No. 4785:—

Read—the following letter from H. W. BLISS, Esq., Commissioner of Salt and Abkári Revenue, to the Secretary to the Board of Revenue, dated Pálghat, 17th May 1885, No. 4645:—

I have the honor to submit the report called for in the Board's Proceedings, Mis. No. 4447, dated the 13th instant, which reached me at Calicut on the evening before last.

2. Properly, to furnish an estimate of the savings which *might possibly* be effected by the postponement of all expenditure not immediately necessary in the public interests would take me some weeks, for it would first be requisite that I should consult the local officers of the department throughout the Presidency. It will be evident, therefore, that I can at present do no more than submit a rough estimate, especially as I am on circuit and had to spend all yesterday in travelling and must again make long journeys both to-day and to-morrow, in order to keep engagements already made with other officers, so that I cannot refer to my records and have to a great extent to trust to my memory.

3. The savings which can be effected *with reference to the orders of Government* are not large, for the expenditure on establishments is not capable of reduction and current year's estimates do not provide for many works which it is possible to postpone. Some Rs. 25,000 may possibly be saved by the postponement of new works; and there will be considerable savings under Repairs, as there will be no expenditure on the Vedarniem Canal and as the cost of most repairs in the Ennore and other factories to which the excise system has recently been extended will fall on the licensees. But these latter savings would have accrued in any case. The same may be said of the

Surla.
Kuppili
Konada.
Penuguduru.
Kattur.
Voyalur.
Puludiwak.
Attipat.
Vallur.
Cuddalore.
Neidavasal.
Negapatam.

savings under the head of Kudivaram and of transport and storage charges, which will be large in consequence of the extension of the excise system to the factories noted in the margin since the budget was prepared and which may probably amount to about Rs. 2,50,000. Other savings may perhaps be made to amount to a lakh of rupees, but more by the operation of usual causes, such as the absence of men on leave, &c., than in consequence of the special orders now under consideration.

4. On the whole, I think, a total saving of Rs. 3,50,000 as compared with the budget may be reckoned on.

Resolution—dated 22nd May 1885, Mis. No. 4785.

The Board are glad to observe from the letter read above that the Commissioner of Salt and Abkári Revenue expects a saving of about Rs. 3½ lakhs. He is requested to telegraph if any reduction can be effected in the provision under Salaries and Establishment, which is in excess of the actuals of 1884-85 by Rs. 1½ lakhs and of the actuals of 1883-84 by Rs. 2½ lakhs. In their Proceedings, dated 19th May 1885, No. 1481, which is now in the press, the Board estimated a saving of at least half-a-lakh of rupees.

(A true Copy and Extract.)

(Signed) E. GIBSON,
Secretary.

To the Commissioner of Salt and Abkári Revenue.

Read—also the following letter from J. S. GAMBLE, Esq., Conservator of Forests, Northern Division, to the Secretary to the Board of Revenue, dated Ootacamund, 16th May 1885, No. 325:—

In reply to Board's Proceedings, Mis. No. 4447, dated 13th May 1885, I have the honor to say that the following appear to me to be the only reductions feasible in the expenditure of the Northern Division during the present year:—

		RS.	
	Ganjam District.		
A. VI (*a*)	Purchase of elephants	4,000	May be postponed for another year.
A. VI (*b*)	Feed and keep of elephants	800	
A. VII (*a*)	Roads, &c.	200	
A. VII (*b*)	Buildings	800	
A. VIII (*b*)	Compensation	500	Will probably not be wanted.
		6,300	
	Vizagapatam District.		
A. VI (*c*)	Stores, tools and plant	100	
A. VII (*a*)	Roads and bridges	100	
A. VIII (*d*)	Plantations	400	Work has not progressed much in Vizagapatam, and last year the provision was not spent. I think therefore that this must be given up.
A. VIII (*f*)	Other works	100	
		700	
	Godávari District.		
A. II	Timber, &c., removed by purchasers.	1,200	This sum will be spared with difficulty, but, as some months must elapse before orders on my report are received, it may be left out.
A. VIII (*d*)	Plantations	300	
A. IX (*c*)	Other Works	100	
		1,600	

Kistna District.

A. VI (*c*)	Stores, tools and plant ...	100	
A. VII (*b*)	Buildings	200	
A. VIII (*b*)	Compensation	1,500	
A. VIII (*d*)	Plantations	3,000	Plantation work is not *very* important until the settlement is completed, and reductions can therefore be made.
A. VIII (*e*)	Fire-protection	1,000	The provision of Rs. 2,000 should amply suffice.
A. VIII (*f*)	Other works	300	
A. IX (*c*)	Other charges	50	
		6,150	

Nellore District.

A. VI (*c*)	Stores, tools and plant ...	800	I do not propose to stop the purchase of the one mile of railway for which sanction has been asked for. I feel sure its purchase will result in improved net revenue.
A. VIII (*d*)	Plantations	4,750	In view of the necessities of reduction we must make Rs. 5,250 suffice. Preparations have been made or more might have been reduced.
		5,550	

Cuddapah District.

A. VII (*a*)	Roads and bridges	2,000	Rs. 1,000 each must be made to suffice.
A. VII (*b*)	Buildings	2,000	
A. VIII (*d*)	Plantations	2,000	Reduction of temporary establishments on plantations, topes and extra watchmen in old reserves.
A. VIII (*f*)	Other works	400	
A. IX (*c*)	Other charges...	100	
		6,500	

Kurnool District.

		RS.	
A. VII (*a*)	Roads and bridges	500	
A. VII (*b*)	Buildings	1,500	The Nandyál house and some other houses must be postponed. Those in progress must however be completed.
A. VIII (*f*)	Other works	200	
		2,200	

Bellary District.

A. VII (*a*)	Roads and bridges	500
A. VII (*b*)	Buildings	500
A. VIII (*b*)	Compensation	500
A. VIII (*d*)	Plantations	500
A. VIII (*f*)	Other works	350
		2,350

Anantapur District.

A. VII (*b*)	Buildings	500
A. VIII (*d*)	Plantations	950
A. VIII (*e*)	Fire-protection	400
		1,850

Nilgiri District.

A. VI (*c*)	Stores, tools and plant ...	50	More reduction not possible without considerable waste, for arrangements are ready for planting and some roads are urgently required.
A. VIII (*d*)	Plantations	500	
		550	
	Total A ...	33,750	

reducing the estimates under A to 2,00,000 rupees.

2. I have not attempted, except very slightly, to reduce the estimates of the heads of service I, II, III which provide for the production of revenue, nor can IV and V be reduced. It would be a great mistake at the present time to stop expenditure on demarcation and settlement and on fire-protection, and the sum mentioned is the most that I can see my way to economizing, unless Government were to decide to reduce departmental timber works as much as possible, when, perhaps, we could make another 40,000 rupees available.

3. Under B, "Establishment," it would be most difficult to make great savings, but a reduction of Rs. 16,000 may perhaps be feasible with economy, and the distribution would be as follows :—

	RS.		RS.
Direction	1,100	Kurnool	1,000
Ganjam	1,200	Bellary	1,000
Vizagapatam	1,700	Anantapur	1,400
Godávari	1,000	Nílgiris	600
Kistna	2,500		
Nellore	3,000	Total ...	16,000
Cuddapah	1,500		

It should be left to Collectors to propose the re-arrangement under sub-heads under B, and especially under B-I(*c*) and B-I(*d*) and under B-III, and the Conservator can then make the necessary transfers within districts. The budget estimates for the division for the year 1885-86 as thus revised will come to—

		RS.	RS.
Revenue	... ...		5,26,000
Expenditure ...	A. "Conservancy and Works" ...	2,00,000	
	B. "Establishment"	2,00,000	
			4,00,000
	Surplus		1,26,000

4. In conclusion, I venture to express the hope that if Government can see its way to permitting the forest estimates (already low enough) to stand, it will be a great advantage, for there is only too much reason to fear that heavy reductions in expenditure and especially in "communications" and "artificial reproduction" will tell heavily on the revenue in the future.

Read—also the following letter from Major I. CAMPBELL WALKER, Conservator of Forests, Southern Division, to the Secretary to the Board of Revenue, dated 18th May 1885, No. 388 :—

In accordance with the instructions conveyed in Proceedings, Mis. No. 4447, of 13th instant, I have the honor to report the reductions which, I consider, may be effected in the expenditure of this division for the current official year, as shown in the accompanying tabular statement.

2. Budget heads A-I, II and III of expenditure correspond with the similar heads of Revenue, and the allotments cannot be reduced without detriment to the latter. That they are not excessive may be inferred from the fact that, from an expenditure of Rs. 84,000 under A-I, Departmental Operations, we expect to realize a revenue of Rs. 2,34,000 ; from an expenditure of Rs. 50,000 under A-II, Removals by Purchasers and Consumers, a revenue of Rs. 4,53,000 ; and from an expenditure of Rs. 1,600 under A-III, Confiscations, a revenue of Rs. 4,000.

3. There are no allotments under A-IV, Forests not managed by Government, and the provisions under A-V and VI, viz., Rents of leased forests, Rs. 4,500, and Feed and keep of cattle, purchase of plant, tools, &c., Rs. 8,000 (in round figures), must stand, as the revenue is, to a great extent, dependent on them.

4. I am reluctant to reduce the small allotment—Rs. 27,500—for Communications and Buildings under A-VII, having regard to their urgency as recently impressed upon me by Government, and therefore propose to retain it, subject to rigid economy in the execution of the works.

5. The same remarks apply to the allotment for Demarcation, Rs. 20,000, under A-VIII (*a*), which, however, I reduce by Rs. 5,000 (in round figures) under "Direction," in the hope that, with great economy, Rs. 15,000 will suffice.

I reduce the amount provided under Direction for Compensation, A-VIII (*b*), by one-half, *i.e.*, Rs. 10,000, retaining the full amount sanctioned under A-VIII (*c*) and (*e*), Surveys and working plans, Rs. 5,000, and Protection from fire, Rs. 20,600, as indispensable.

6. Under A-VIII (*d*), Plantations, I propose reductions amounting to Rs. 15,000. In order to effect this, I have already telegraphed to the Collectors of North and South Arcot, Trichinopoly, Tanjore and South Canara to stop all extensions. I retain only the amounts required for maintenance of existing plantations, with a small margin to cover the expenditure already incurred in the formation of nurseries, &c., which will, of course, be lost.

The only exceptions I have made are in the case of the proposed extension in Nilambúr, for which Rs. 3,600 is allotted, as arrangements have, it is understood, been made to procure the mahogany seed, which must be utilized immediately on receipt and everything else is ready, and for replanting felled compartments in Trichinopoly, Rs. 1,250, delay in which would upset the working plan and sustained yield of the existing plantations.

7. Under A-VIII (*f*), Other Works, I propose reductions amounting to Rs. 4,500, which can, I think, be effected without serious inconvenience by curtailing cultural operations in the districts of North and South Arcot, Tanjore and Tinnevelly. Out of a sum of Rs. 5,004 allotted under A-IX (*c*), Other Charges —Direction, for the reasons explained in the budget explanatory note, I reduce one-half, Rs. 2,500, as the balance will, I think, prove sufficient to meet the charges or advances under this head.

These amounts represent a total of Rs. 36,848, which I propose to reduce under major head A, Conservancy and Works. If to this be added Rs. 13,100, the savings anticipated under B, Establishments, owing to the absence of officers on leave, the non-appointment of Assistant Conservators provided for in the budget and the employment of men in the subordinate staff on the lower rates of pay, the total will amount in round numbers to Rs. 50,000.

Economy will, of course, be enjoined in carrying out all works and in the grant of travelling allowances to the establishments, and it is probable that further savings may be effected during the year.

8. I would, however, submit that, in a department like this, it is rather to the legitimate increase of revenue than to the curtailment of expenditure that we should look for a surplus. The revenue of the Southern Division for the year is estimated at Rs. 7,00,000, but I have already warned the Board in paragraph 6 of my letter, No. 2483, of 3rd March, printed with their Proceedings of 20th April, No. $\frac{1228}{\text{Forest 228}}$, that under certain circumstances, that amount will probably not be realized. Government have since modified their orders as to the revenue from trees on tank beds and a report has been submitted on the proposal to recognize the exercise of "privileges," in a wholesale manner, which would certainly seriously affect our revenue, and probably convert the surplus into a deficit.

9. I would ask the Board or Government, in issuing orders on the subject, generally to impress on Collectors the necessity for increasing the Forest Revenues by every legitimate means and to direct their attention specially to the revenue from minor forest produce and grazing dues, which is capable of very great development in almost every district in my division.

Resolution—dated 23rd May 1885, No. 1536, Press.

The Board beg to submit the following proposals with reference to the telegram from Government, dated 12th instant, and G.O., of the same date, No. 2421, Revenue Department, communicating the Resolution of the Government of India regarding the reduction of all expenditure not absolutely necessary in the public interests.

2. The accompanying statements show the actuals of the past two years, the provision made by the Board for 1885-86, and the amount approved by Government, under the several budget heads except Forests. Under Land Revenue, the Board provided 36 lakhs of rupees, which very nearly corresponds with the actuals of 1884-85 (Rs. 35,72,000) as ascertained from the Accountant-General's office. The provision was reduced by Government to Rs. 34,94,000, or by more than a lakh of rupees. After mature consideration, the Board are of opinion that no reduction will be possible in the items noted in the margin. The practicability of effecting any saving in taluk establishments and office contingencies is doubtful, but any savings that may result will certainly be more than counterbalanced by increased expenditure under other heads. Under Process Service and Cost of Land, the amount fixed by Government will most certainly have to be raised, as will also be the case with Excise on Spirits and Drugs, under which the Government reduced the Board's estimate by Rs. 59,000, pending the orders of the Government of India on certain proposals which have since been sanctioned. Under District Post, the actuals of 1884-85 exceed the budget allotment as reducedby Government by Rs. 3,000.

Refunds and drawbacks.
Land revenue.
Stamps.
Excise on spirits and drugs.
Customs (sea and land).
License-tax.
District post.
Administration, Board of Revenue.
Birth and death registration.
Trade statistics.
Printing.
Provincial, miscellaneous.

3. A sum of Rs. 16,000 is provided on account of Public Exhibitions and Fairs. The Board think that the whole of this amount may be saved, and the exhibitions postponed to 1886-87.

4. Under Civil Buildings, a sum of Rs. 24,000 is provided for Original Works—Rs. 16,000 under Land Revenue and Rs. 8,000 under Customs. From the lists furnished by Collectors, it would seem that none of these works are of such urgent necessity as to render their postponement inexpedient. The Board think that the whole of this amount may be saved, and about a fourth of the sum allotted for repairs, or Rs. 13,000, making a total of Rs. 37,000 under this head.

5. As regards minor irrigation works, Collectors have been instructed to stop all works the postponement of which for a year will not entail any serious loss or inconvenience. Having in view, however, the condition of most of these works and the great damage caused to them by the heavy floods of November and December 1884, the Board do not think it prudent to calculate upon a saving of more than 1¼ lakhs out of the 3¾ lakhs sanctioned under this head.

6. The Commissioner of Salt and Abkári Revenue proposes a reduction of Rs. 3½ lakhs in the budget estimate of the Salt Department The items in which the reduction is proposed are noted in the margin. The large reduction under "Salt purchase and freight" is due to the extension of the excise system into several of the factories subsequent to the date of the preparation of the budget estimate. The Commissioner has been requested to telegraph if a reduction of at least half-a-lakh of rupees cannot be made under Salaries and Establishments, the provision for which during the current year exceeds the actuals of 1883-84 by Rs. 2½ lakhs and those of 1884-85 by Rs. 1½ lakhs. A reduction of half-a-lakh would still leave a margin of one lakh of rupees over the charges

	RS.
Petty Construction and Repairs—	
New works	25,000
Petty repairs and certain other items	75,000
Salt purchase and freight	2,50,000
Total ...	3,50,000

of the preceding year. The Board will report further on the point on receipt of the Commissioner's reply.

7. Under Forests, a reduction of a lakh of rupees in round numbers is proposed by the Conservators as detailed below. Mr. Gamble hints at the possibility of further reduction amounting to Rs. 40,000 "if the Government decide to reduce departmental timber works as much as possible." He will be requested to report to what extent such a reduction would affect the receipts of the department :—

——	Northern Circle.	Southern Circle.	Total.
A.—Conservancy and Works.	RS.	RS.	RS.
II. Timber and other Produce removed from the Forest by Consumers or Purchasers	1,200	...	1,200
VI. Live and Dead Stock—			
(*a*) Purchase of Cattle	4,000	...	4,000
(*b*) Feed and keep of Cattle	800	...	800
(*c*) Plant, Tools and Instruments	1,050	...	1,050
VII. Communications and Buildings—			
(*a*) Roads and Bridges	3,300	...	3,300
(*b*) Buildings	5,500	...	5,500
VIII. Demarcation and Improvement and Extension of Forests—			
(*a*) Demarcation	...	5,150	5,150
(*b*) Compensation for Land and Rights ...	2,500	10,000	12,500
(*d*) Plantations	12,400	15,000	27,400
(*e*) Protection from Fire	1,400	...	1,400
(*f*) Other Works	1,350	4,500	5,850
IX. Miscellaneous—			
(*c*) Other Charges	250	2,500	2,750
Total, A—Conservancy and Works ...	33,750	37,150	70,900
Total, B—Establishment	16,000	13,100	29,100
Grand Total ..	49,750	50,250	1,00,000

8. The Director of Revenue Settlement and Agriculture has furnished the Board with copies of his reports to Government regarding the reduction proposed in the Settlement and Agriculture and Inam Departments. Mr. Price estimates the probable savings at Rs. 44,000 and Rs. 8,000, respectively.

9. The total reduction in the estimate of 1885-86 is thus Rs. 6,80,000 as detailed below :—

	RS.
Public Exhibitions, &c.	16,000
Civil Buildings...	37,000
Minor Irrigation	1,25,000
Salt	3,50,000
Forest	1,00,000
Revenue Settlement and Agriculture	44,000
Inam Department	8,000
Total ...	6,80,000

10. The instructions of Government have been communicated to all officers and they have been requested to observe the strictest economy and effect such further reductions in expenditure as may be possible.

Items.	Actuals of 1883-84.	Actuals of 1884-85.	Board's Estimate for 1885-86.	Government Estimate for 1885-86.	Amount of Reduction proposed.	Remarks.
	RS.	RS.	RS.	RS.	RS.	
LICENSE TAX.						
Allowance to Deputy Collector ..	1,500	1,500	1,500	1,500	..	No reduction is possible.
Establishment	1,560	1,560	1,560	1,560	..	
Remuneration to Municipalities .	3,710	3,730	5,300	5,300	..	
Contingencies	30	10	640	640	..	
Total ..	6,800	6,800	9,000	9,000	..	
District Post	1,06,800	1,10,100	1,14,000	1,07,000	..	The actuals of 1884-85 exceed the budget amount and no reduction is possible.
BOARD OF REVENUE.						
Members	1,12,100	1,33,600	1,20,100	1,20,100	..	The actuals of 1884-85 exceed the budget amount and no reduction is possible.
Secretary	24,100	24,000	23,040	23,040	..	
Sub-Secretary	18,700	23,200	17,280	17,280	..	
Establishment	81,500	79,800	81,580	81,580	..	
Temporary Establishment ..	400	500	400	400	..	
Travelling Allowance	1,600	1,400	..	..	..	
Service Postage	6,300	5,200	7,500	7,500	..	
Service Telegram	1,400	3,200	2,000	2,000	..	
Contingencies	4,400	6,500	8,100	8,100	..	
Total ..	2,50,500	2,77,400	2,60,000	2,60,000	..	
MINOR DEPARTMENT.						
Public Exhibitions	18,500	14,100	16,000	16,000	16,000	Public exhibitions may be postponed.
Birth and Death Registration ..	11,100	11,100	12,000	11,000	..	
Land Trade Establishment ..	25,100	25,600	23,000	23,000	..	
Sea-borne Trade Establishment .			5,500	5,500	..	
Rain Gauges	100	..	500	150	..	
Total, Minor Departments ..	54,800	50,800	57,000	55,650	16,000	
PRINTING.						
Establishment	45,900	44,900	44,900	44,900	..	The actuals of the past two years exceed the budget estimate for 1885-86. No reduction can therefore be proposed.
Temporary Establishment ..	600	700	1,000	1,000	..	
Service Postage	18,900	18,400	20,000	20,000	..	
Purchase of Press Materials ..	17,100	11,100	17,000	17,000	..	
Miscellaneous	3,300	4,300	3,600	3,600	..	
Printing at Private Press ..	33,300	28,100	13,500	13,500	..	
Total, Printing ..	1,19,100	1,07,500	1,00,000	1,00,000	..	
EXCISE.						
Increase of pay to Commissioner.	..	1,100	6,000	6,000	..	The provision under this head will most certainly have to be raised. The Government reduced the Board's estimate pending the orders of the Government of India on certain proposals for the appointment of an Assistant Commissioner and some Inspectors and Sub-Inspectors for the Abkári administration.
Assistant Commissioner	..		6,000	..	..	
Inspectors, Assistant and Sub-Inspectors.	..	..	64,000	30,000	..	
Assistant Commissioner's Establishment.	..	..	1,900	..	..	
Circle and Factory Establishment.	..	..	16,000	..	..	
Temporary Establishment in Central Office.	..	..	5,800	5,800	..	
Wynaad Allowance	..	..	1,300	..	..	
Contingencies	..	..	3,000	3,200	..	
Total ..	..	1,100	1,04,000	45,000	..	
District Charges.						
Establishment	22.400	41,900	22,100	22,100	..	Under this head also no reduction seems feasible.
Rewards	600	1,600	2,700	2,700	..	
Freight, &c., of Spirits	1,71,500	1,77,200	1,76,000	1,76,000	..	
Registration Charges	300	3,400	3,100	3,100	..	
Miscellaneous	4,600	6,300	6,100	6,100	..	
Total ..	1,99,400	2,30,400	2,10,000	2,10,000	..	
Grand Total, Excise ..	1,99,400	2,31,500	3,14,000	2,55,000	..	

Items.	Actuals of 1883-84.	Actuals of 1884-85.	Board's Estimate for 1885-86.	Government Estimate for 1885-86.	Amount of Reduction proposed.	Remarks.
Customs.	RS.	RS.	RS.	RS.	RS.	
Sea Customs.						
Collector and Deputy Collector ..	22,000	21,800	23,900	23,900	..	Under this head also no reduction seems feasible.
Establishment	1,07,800	1,00,400	1,00,000	1,00,000	..	
Temporary Establishment ..	1,100	1,300	1,300	1,300	..	
Travelling Allowance	1,000	1,800	1,200	1,200	..	
Service Postage	1,500	1,500	2,000	2,000	..	
Service Telegram	200	100	500	500	..	
Binding Books	100	100	200	200	..	
Office-rent	700	700	700	700	..	
Assessment	2,100	3,700	4,000	4,000	..	
Purchase of Furniture and Miscellaneous.	3,200	3,200	8,000	8,000	..	
Fees to Clerks for working out of Office hours.	15,200	15,900	16,500	16,500	..	
Rewards	200	..	1,700	1,700	..	
Total, Sea Customs ..	1,55,100	1,50,500	1,60,000	1,60,000	..	
Land Customs.						
Establishment	8,200	8,200	8,000	8,000	..	Under this head also no reduction seems feasible.
Rents, Rates and Taxes	200	200	200	200	..	
Miscellaneous	1,300	1,300	1,800	1,800	..	
Total ..	9,700	9,700	10,000	10,000	..	
Grand Total, Customs ..	1,64,800	1,60,200	1,70,000	1,70,000	..	
Salt.						
Commissioner and Deputy Commissioners.	66,000	71,200	61,500	61,500	..	
Assistant Commissioners ..	53,500	55,700	63,000	63,000	..	
Inspectors, Assistant and Sub-Inspectors.	2,69,500	2,90,100	3,47,100	3,47,100	..	
Establishment of Commissioners, Deputy and Assistants.	39,300	4,06,100	42,400	42,400	..	
Circle Establishments and Factory.	2,96,600		4,24,500	4,24,500	..	
Temporary Establishments ..	33,200	34,100	61,000	61,000	..	
Fish-curing Establishments ..	..		9,500	9,500	..	
Boat Establishment	400	200	..	..	..	
Total Salaries and Establishments.	7,58,500	8,57,400	10,09,000	10,09,000	..	
Office Contingencies.						
Travelling Allowance	43,600	40,000	51,000	51,000	1,00,000	*Vide* Commissioner's letter.
Service Postage	8,300	8,600	7,800	7,800		
Service Telegram	1,500	1,500	1,800	1,800		
Petty Construction and Repairs.	1,47,500	97,800	1,10,000	1,10,000		
Rewards	22,100	18,800	23,000	23,000		
Freight and other Charges ..	7,800	16,100	22,000	22,000		
Charges for destroying spontaneous Salt.	700	300	900	900		
Remittance Charges	900	900	1,000	1,000		
Charges for examining Salt Heaps.	800	700	1,100	1,100		
Charges for conveying Salt to French Government.	7,300	11,800	8,000	8,000		
Charges for conveying Salt to Fish-curing Yards.	5,900	9,000	12,000	12,000		
Boat Charges	800	300	500	500		
Purchase and Repair of Arms, &c.	600	6,700	2,000	2,000		
Do. of Tents ..	16,700	3,700	2,000	2,000		
Rents, Rates and Taxes ..	3,100	11,700	3,000	3,000		
Miscellaneous	23,000	8,800	21,400	21,400		
Total Contingencies ..	2,90,600	2,36,700	2,67,500	2,67,500	1,00,000	
Salt Purchase and Freight.						
Purchase of Salt Manufacturer's Share.	4,54,100	4,30,200	3,50,600	3,50,600	2,50,000	
Conveying and Storing Salt ..	92,300	81,500	69,400	69,400		
Cost and Repair of Salt Machines.	1,800	2,700	7,000	7,000		
Cost of gathering spontaneous Salt.	100	1,100	5,000	5,000		
Miscellaneous	9,100	14,200	11,500	11,500		
Total Purchase and Freight.	5,57,400	5,29,700	4,43,500	4,43,500	2,50,000	
Grand Total, Salt ..	16,06,500	16,23,800	17,20,000	17,20,000	3,50,000	

Items.	Actuals of 1883-84.	Actuals of 1884-85.	Board's Estimate for 1885-86.	Government Estimate for 1885-86.	Amount of Reduction proposed.	Remarks.
STAMPS.	RS.	RS.	RS.	RS.	RS.	
Superintendence	29,000	35,200	32,000	32,000	..	No reduction is possible.
Discount on Sale of General Stamps.	76,800	80,700	79,000	79,000	..	
Discount on Sale of Court-fee Stamps.	28,900	27,900	30,000	30,000	..	
Discount on Sale of Court-copy Stamps.	7,500	16,500	10,000	10,000	..	
Establishment and Contingencies in Districts.	6,900	7,500	9,000	9,000	..	
Total Stamps ..	1,49,100	1,67,800	1,60,000	1,60,000	.	
REFUNDS AND DRAWBACKS.						
Salt Refunds	3,500	4,200	1,000	1,000	..	It is impossible to make any reduction under Refunds and Drawbacks.
Customs Refunds	10,600	12,600	14,000	14,000	..	
Land Revenue Refunds	3,27,400	1,38,200	1,20,000	96,000	..	
Stamp Refunds	62,900	82,400	78,000	72,000	..	
Excise do.	94,400	41,000	5,000	5,000	..	
License-tax Refunds	5,000	4,600	7,000	7,000	..	
Total Refunds ..	5,03,800	2,83,000	2,25,000	1,95,000	..	
Drawbacks ..	900	2,900	5,000	5,000	..	
Total Refunds and Drawbacks ..	5,04,700	2,85,900	2,30,000	2,00,000	..	
LAND REVENUE.						
Collectors, Sub and Head Assistant Collectors.	9,74,600	9,93,100	9,60,000	9,60,000	..	The Board's provision against Land Revenue proper was reduced by Government by Rs. 64,000. The actuals of 1884-85 as obtained from the Accountant-General's Office exceed the reduced provision by Rs. 16,700. It is doubtful if there will be any saving under Taluk Establishments and Office Contingencies, but even if there is it will certainly be more than counterbalanced by increased expenditure under other heads.
Assistant Collectors	1,08,800	1,10,000	1,20,000	1,00,000	..	
Deputy Collectors	2,06,700	2,15,500	2,35,800	2,19,000	..	
Huzur Establishments	7,21,400	7,32,900	7,24,000	7,24,000	..	
Taluk do.	14,87,900	14,53,300	14,74,000	14,74,000	..	
Temporary do.	28,500	37,800	45,700	37,000	..	
Medical Subordinates	37,700	38,400	43,500	40,000	..	
Travelling and Tentage Allowances.	2,59,000	2,84,700	2,90,000	2,80,000	..	
Office Contingencies	1,53,200	1,40,000	1,60,000	1,55,000	..	
Total ..	39,57,800	40,05,700	40,53,000	39,89,000	..	
Deduct one-fifth ..	7,65,900	7,65,700	8,02,000	7,89,000	..	
Remainder ..	31,91,900	32,40,000	32,51,000	32,00,000	..	
One-fifth of Agency Charges ..	..	1,100	12,000	12,000	..	
Land Revenue, Miscellaneous.						
Process Service Charges ..	1,30,200	1,24,000	1,00,000	60,000	..	Under this head also (Land Revenue, Miscellaneous) the Government have reduced the Board's estimate by Rs. 55,000 chiefly under Process Service and cost of land. The actuals of 1884-85 very nearly correspond with Board's estimate, and the Board therefore think that the amount sanctioned by Government will most certainly have to be raised in the course of the year.
Cost of Land	13,600	8,200	25,000	15,000	..	
Law Charges	23,400	16,100	20,000	20,000	..	
Service Telegram	8,500	1,500	11,000	11,000	..	
Service Postage	1,01,700	1,05,900	1,05,000	1,00,000	..	
Remittance Charges	17,300	17,800	19,000	19,000	..	
Amin Devi Charges	22,600	28,600	24,200	24,200	..	
Special Revenue Establishments.	2,100	..	1,900	1,900	..	
Miscellaneous	8,900	18,800	18,900	18,900	..	
Total Miscellaneous ..	3,28,300	3,20,900	3,25,000	2,70,000		
Fishery Charges ..	11,700	10,000	12,000	12,000	..	
Grand Total, Land Revenue ..	35,31,900	35,72,000	36,00,000	34,94,000	..	

Items.	Actuals of 1883-84.	Actuals of 1884-85.	Board's Estimate for 1885-86.	Government Estimate for 1885-86.	Amount of Reduction proposed.	Remarks.
	RS.	RS.	RS.	RS.	RS.	
Miscellaneous.						
Remitting Treasure beyond District	19,300	26,000	20,000	20,000	..	No reduction is possible.
Maintenance and Burial of Paupers	2,700	5,000	6,000	4,500	..	
Native Choultries and Langarkhanas	25.200	24,700	25,000	25,000	..	
Distribution of Cattle-disease Medicine	..	..	1,000	..	..	
Improvement of Agriculture and Trade	..	..	2,000	2,000	..	
Rewards for the Destruction of Wild Animals	81,900	1,21,300	1,00,000	1,00,000	..	
Stamping Weights and Measures.	17,100	18,000	20,000	17,000	..	
Miscellaneous	..	..	..	..	..	
Total ..	1,46,200	1,95,000	1,74,000	1,68,500	..	
Famine Relief—Fire, Flood, &c., Charges	3,100	37,800	2,000	..	..	
Civil Buildings.						
Land Revenue	61,400	69,100	73,000	64,000	37,000	All original works (Rs. 16,000 under Land Revenue, and Rs. 8,000 under Customs) may be postponed; also about one-fourth of the sum provided for repairs or Rs. 13,000. A total of Rs. 37,000 might thus be saved.
Customs	5,800	6,700	15,600	14,600		
Minor Departments	900	600	1,400	1,400		
Total ..	68,100	76,400	90,000	80,000	37,000	
Minor Irrigation	3,20,800	4,04,600	4,00,000	3,75,000	1,25,000	The reserve at the Board's disposal Rs. 47,000 and say about a fourth of the remainder which has been allotted to the districts may be saved.

(A true Copy and Extract.)

(Signed) C. F. MacCARTIE,
Acting Sub-Secretary.

To the Secretary to Government, Revenue Department,
with copies of Board's Proceedings, No. 1481,
dated 19th May 1885, and Mis. No. 4785,
dated 22nd May 1885, and copies of two letters.

Copy to the Commissioner of Salt and Abkári Revenue.
,, ,, Conservators of Forests.
,, ,, Director of Revenue Settlement and Agriculture.
,, ,, Superintendent of Stamps.
,, all Collectors.

Read—the following Proceedings of the Board of Revenue, dated 27th May 1885, Mis. No. 4930:—

Read—the following telegram from the Commissioner of Salt and Abkári Revenue, to the Secretary to the Board of Revenue, dated Ootacamund, 25th May 1885:—

Vide Board's Proceedings, No. 4785, Miscellaneous. No savings likely on establishments beyond those included in the lakh of rupees mentioned at end paragraph 3 of my letter, No. 4645, 17th instant.

Resolution—dated 27th May 1885, Mis. No. 4930.

Submitted to Government in continuation of Board's Proceedings, dated 23rd May 1885, No. 1536.

(A true Copy and Extract.)

(Signed) C. F. MacCARTIE,
Acting Sub-Secretary.

To the Secretary to Government, Revenue Department.

Copy to the Commissioner of Salt and Abkári Revenue.

Read—the following letter from J. F. PRICE, Esq., Acting Director of Revenue Settlement and Agriculture, to the Acting Secretary to Government, Revenue Department, dated Madras, 21st May 1885, No. 1441 :—

I have the honor to submit my reply to your telegram, dated 12th instant, and to G.O., Revenue Department, No. 2421, of the same date.

2. *Agricultural Department.*—The orders of Government sanctioning the abolition (from the 1st September) of the Government Farm at Saidápet have been received. I do not see why it should not be got rid of at an earlier date, though it would be perhaps advisable that Mr. Benson, who is due from leave on the 26th June next, should wind up matters.

3. Allowing, however, that the farm is closed on the date fixed, the following savings will be effected :—

	RS.
Pay of the Deputy Superintendent for six months, at Rs. 150 per mensem	900
Pay of farm establishment for six months, at Rs. 87 per mensem .	520
Charges of the farm, as per budget, for seven months	4,050
Estate charges and improvements, as per budget, for seven months.	1,200
Total saving for the official year by the abolition of the farm ...	6,670
Add balance of allotment for exhibition of improved ploughs and ploughing competitions	1,000
Total saving for the official year which can be effected from the funds allotted for the Government Farm	7,670

4. It is, I think, impossible to reduce the establishment attached to the Agricultural Reporter, and if the saving above indicated is to be effected, the formation of an agricultural reporting staff and the preparation of district analyses for famine purposes will have to be deferred.

5. I consider that it would be undesirable and contrary to the interests of the public service to, in any way, curtail the Veterinary and Cattle Diseases Inspection Department. A beginning, which is likely to, in the future, bear useful fruit, has been made, and it would be therefore unwise to do anything to weaken the department.

6. The proposal of my predecessor in office to, from the beginning of the next official year, debit a moiety of the cost of the cattle diseases inspection staff to Local Fund Boards is now before Government. The suggestion is, I consider, a fair one, and if it is desired to at once relieve the Imperial exchequer, effect might be given to it from the beginning of the current official year. This would give a saving of Rs. 10,930, as the total budget allotment for the department, as far as it concerns local inspection, is Rs. 21,860 as per margin.

		RS.
Deputy Inspector	Salary ...	3,600
	Travelling allowance ...	1,100
Local Cattle Disease Inspectors.	Salaries ...	12,340
	Travelling allowance ...	3,690
	Contingencies...	1,130
	Total ...	21,860

7. I would suggest, with regard to this measure, that the deduction might be made from the surplus of the Pound Fund before distribution between Local Boards

and Agricultural Services. This would obviate my asking the consent of the Local Boards, which would, in all probability, object on the ground that the resources at their command are, in the majority of cases, very limited.

8. If the measure mentioned above is carried into effect from the 1st April last, the total saving under all heads connected with the farm would be for the official year Rs. 18,600.

9. *Irrigation Accounts.*—It is quite out of the question to make any reduction in this branch of my office.

10. *Settlement Department.*—I have consulted (by letter) all the Deputy Directors, and they are unanimously of opinion that little, if any, reduction can, without sacrificing efficiency, be effected. It has been pointed out to me that the staffs of the various parties have already been cut down to the lowest possible working limits.

There is, however, one point in which, very decidedly, an alteration may be made, and this is in the rates of pay in the Madura (No. III) party. Why the officials connected with this should ever have been allowed higher salaries than those belonging to others, is by no means clear. The Government appears, on the remark made in the concluding portion of paragraph 19 of the memorandum embodied in G.O., Revenue Department, No. 575, dated 11th April 1878, to have allowed the exceptional rates of pay in No. III party to continue. In 1881 orders were issued by the Director stating that, when filling up vacancies, the ordinary rates of salary were to be put in force, but this does not appear to have as yet been done to any great extent. The increased charges, caused by this extra payment, amount to Rs. 182 per mensem, and if abolished from the 1st July next, as I consider that they should be, the saving effected would be Rs. 1,456.

To this may be added the survey establishment sanctioned for Wynaad, which is not at present needed, and the budget sanction for which is Rs. 6,890. Further, Mr. Wilson's personal allowance (Rs. 400 per mensem) will be saved for eleven months, as will Rs. 417 per mensem for seven months from the salary of Mr. Cox, who is now absent on furlough. These two items will give Rs. 7,319.

The total saving which I have worked out here, amounts to Rs. 15,665.

11. I now turn to the proposals of Deputy Directors, the feasibility, or desirability of some of which, is a matter for doubt, whilst others are distinctly safe.

12. Mr. Lakshmikanta Rao (No. V party) says that the hands employed upon the measurements of sub-divisions of fields might, as a temporary measure, be dispensed with. He, however, does not approve of this step. The monthly cost of this establishment is Rs. 518. If abolished from the 1st of July, the saving thus effected would be Rs. 4,144. He further suggests that vacancies, either temporary or permanent, which, from time to time, arise might, until further orders, be left unfilled. It is not likely that this would give much in the way of saving. I should say that Rs. 5,000 would be the utmost that could be saved for the remainder of the official year under the proposals made by the Deputy Director, but these should not be carried into effect unless absolutely required.

13. Colonel Stuart (No. III party) states that the following savings might be made :—

		RS.
I.	Employing a 3rd-class, in lieu of a 2nd-class, Hospital Assistant for eleven months	160
II.	Retirement of a head classifier and not filling up the post, and general savings on salaries of clerks up to the end of the official year	900
III.	Contingencies for the remainder of the official year	100
IV.	House-rent during the remainder of the official year	100
V.	By not filling up vacancies and rateable reduction in extra establishments	1,740
	Total ...	3,000

Items I, III, and IV are petty savings and can be carried out. As regards item II the classification work is over and the party may do without a fourth head classifier for some time to come.

The last item is the heaviest, and it is very problematical indeed whether the extra establishment will not, as the settlement work will soon begin, need to be kept up to its full strength. It therefore appears to me that only Rs. 1,260, out of the amount proposed by the Deputy Director, can actually be saved, without impairing the efficiency of the party.

14. Mr. Clerk (Nos. I and II parties) says that the measurement establishment having completed its work is being dispensed with, and that a saving of Rs. 1,053 for the remaining nine months of the year will be the result; further, that the head clerk of the Assistant Director's office and seven party peons are not required and have not been entertained, and that there will be a probable saving, during the remainder of the official year, of Rs. 270 in salaries of absentees. The total of these is Rs. 2,187, from which, however, has to be met the salary of an Hospital Assistant for ten months, for which no provision was made in the budget. The balance is Rs. 1,800. This refers to Mr. Clerk's own party.

In No. I party larger reductions can be made, as owing to this party being about to move into the Bellary district, where the work of classification will alone have to be attended to, the major portion of the extra hands engaged on settlement work can be dispensed with. A few men will have to be retained up to the end of the official year, in order to complete work connected with North Arcot. Allowing for this and for Rs. 2,460, the proportionate charges for the extra establishment engaged in the Central office and debited to the party, the net saving is Rs. 3,700 for the remainder of the current official year.

15. No reduction can be made in the Wynaad (No. VI) party.

16. Adding the totals of the figures given by Deputy Directors to those mentioned in paragraph 10 of this letter, the result is Rs. 22,425. This may, as savings can probably be made of small amounts here and there, be put down at Rs. 25,000.

17. I had in view at one time making reductions in the Central office and in all the parties, excepting No. VI, and dispensing with the Assistant Directors and their establishments, and I thought also of proposing that two parties should be merged, so as to make one strong one and so to save cost of supervision and effect some reduction, but on looking over the programme of operations and considering matters after reading what the Deputy Directors had to say, came to the conclusion that neither plan would be desirable, nor likely to conduce to the proper and efficient working of the department. I have, however, worked out the details, and, if required, they can be sent up, but I do not think it necessary to trouble Government with them now.

18. The total of the savings and reductions, &c., which can safely be made in the Revenue Settlement and Agricultural Departments, is Rs. 43,600, or in round numbers Rs. 44,000. This is exclusive of Rs. 16,000 provided for Agricultural Exhibitions, which I understand is being dealt with by the Board of Revenue.

19. If any further reductions are called for, the only course that can be followed will be to cut down establishments, break up one Settlement party, give up, for the time being, the settlement of the Bellary district, and dispense with the Assistant Directors.

20. Although the subject is not directly connected with my department, I venture to suggest that it would effect some considerable saving if, for the present, Assistant Collectors were not attached to Survey and Settlement parties. This would save charges for temporary Deputy Collectors for some five months in each case, and travelling allowances.

Read—the following letter from J. F. PRICE, Esq., Inam Commissioner, to the Secretary to Government, Revenue Department, dated Madras, 18th May 1885, No. 181 :—

I have the honor to acknowledge the receipt of your telegram, dated 12th instant, and of G.O., Financial Department, No. 845, dated 9th instant.

2. I do not consider that any reductions can be made in the small permanent establishment of this office.

3. I think, however, that until the beginning of next official year, at any rate, the Deputy Collector employed in settling village service inams, his establishment, and that dependent upon his work in my office, might be dispensed with.

4. Under G.O., Revenue Department, No. 1436, dated 30th December last, the Deputy Collector is now employed in Bellary, and will have, by the end of this month, completed four out of the eight taluks of which the district is composed.

5. The revision of village establishments in districts which have been settled, or nearly so, is in the hands of Collectors, and from my experience of the work in the Salem and Chingleput districts, I am of opinion that drawing up satisfactory schemes and seeing them through to sanction will take longer than appears to be anticipated. In more than one district the title-deeds for village service inams have been issued, but they are lying in the Collectors' offices pending the revision of village establishments and the consequent introduction of the Village Cess Act, without which the new system cannot be worked.

6. The Inam Deputy Collector works faster in settling than my office can in making out, &c., the necessary title-deeds, preparing the vernacular registers, &c., and there is consequently enough work, if the extra establishment here is abolished, to keep the regular staff fully employed for some time to come.

7. I therefore do not consider that dispensing with, for the remainder of the official year, or until such time as urgent financial pressure is removed, the establishment required to settle the village service inams will be injurious to the public interests. There is no particular need to hurry on with the work, and it can well stand over until better times come.

8. The total monthly cost of the Deputy Collector and his office is Rs. 491, or Rs. 5,892 per annum. The budget grant for travelling is Rs. 2,500, and the allowance for contingencies is Rs. 250 per annum. The annual grant for the temporary establishment in the Central office for writing title-deeds, &c., in connection with village service inams is Rs. 2,000. The total of these items is Rs. 10,640 per annum. The probable charges, up to the end of the current month, will be Rs. 2,706 ; they may be a rupee or two more or less, as we do not yet know what the travelling and contingent bills for May will exactly amount to. This will leave Rs. 7,934 for expenditure during the remaining ten months of the year, and this sum will be saved if the proposal which I make is carried out from the 31st instant. As there will be a saving in contingencies, stationery, and postage in this office, the total may farily be set down at Rs. 8,000.

Read—again the following telegram from W. WILSON, Esq., Acting Secretary to Government, Revenue Department, to the Inam Commissioner, dated 26th May 1885 :—

If inam inquiry continued till Bellary finished, what will be department's saving ?

Read—the following telegram from J. F. PRICE, Esq., Inam Commissioner, to the Secretary to Government, Revenue Department, dated Madras, 26th May 1885 :—

Saving three thousand six hundred. Explanatory letter follows.

Read—the following letter from J. F. PRICE, Esq., Inam Commissioner, to the Secretary to Government, Revenue Department, dated Madras, 26th May 1885, No. 183:—

Adverting to your telegram of this date and in continuation of mine of to-day, I have the honor to state that three taluks of the Bellary district have been settled, and that the fourth is in progress and should be nearly completed by the end of this month. It would certainly have been, had there not been delay owing to the karnams having been called away for Jamabandi.

2. The remaining taluks will probably be finished by the end of October.

3. The cost of establishment for five months will approximately be as under:—

	RS.
Temporary establishment at Central office (Rs. 161 per mensem) which must be retained if the settlement of village service inams is continued	805
Deputy Collector, at Rs. 250 per mensem	1,250
Establishment of Deputy Collector, at Rs. 241 per mensem ...	1,205
Travelling allowance of Deputy Collector and establishment calculated on average of previous expenditure	1,040
Contingencies	100
Total ...	4,400

4. This, deducted from the Rs. 8,000 mentioned in my letter, No. 181, dated 18th instant, gives Rs. 3,600 as the saving to be effected for the official year.

Read—the following letter from Colonel H. T. ROGERS, R.E., Superintendent, Madras Survey, to the Secretary to Government, Revenue Department, dated Ootacamund, 22nd May 1885, No. 101—G.:—

With reference to your telegram, dated 12th May 1885, I have the honor to inform you that Rs. 75,000 from the budget allotment of the Survey Department for the current year can be surrendered without material detriment to the interests of the Government service.

2. The amount to be surrendered will be divided as follows:—

	RS.
No. I Party	30,000
No. III do.	15,000
No. V do.	30,000
Total ...	75,000

I think it would be most injudicious to reduce by even the smallest amount the annual allotment of Parties II and IV. The revenue survey of the Bellary and South Arcot districts by these parties is in full operation, and it would be most unadvisable to cause any decrease in the rate of progress, for any delay would result in much loss to Government.

3. With regard to any prospective further reduction of expenditure by the Survey Department, I am unable to state what can be effected, because any further reduction to any extent can only be made in conjunction with a corresponding reduction in the expenditure of the Revenue Settlement Department, for it is necessary that the progress of the survey should not fall short of that of the settlement.

981-

Read—the following letter from M. A. LAWSON, Esq., Director of Government Cinchona Plantations, Nílgiris, to the Secretary to Government, Revenue Department, dated Ootacamund, 19th May 1885, No. 11 :—

With reference to G.O., No. 2421, dated 12th May 1885, I have the honor to state that I do not think any material savings can be effected out of the budget allotment for the maintenance of the Government Parks and Gardens on the Nílgiris.

2. In the case of the Government Cinchona Plantations, I think I may safely say that, after making provision for unforeseen expenditure, I shall be able to save at least Rs. 10,000.

Order—dated 1st June 1885, No. 639, Revenue.

Miscellaneous.

The foregoing papers contain the replies of the several heads of departments to G.O., dated 12th May 1885, Mis. No. 2421, calling upon them to report what reductions, immediate and prospective, are possible in the departments under their respective control.

2. The Board of Revenue propose the following reductions :—

	RS.
1. Public Exhibitions and Fairs	16,000
2. Civil Buildings	37,000
3. Minor Irrigation Works	1,25,000
4. Salt	3,50,000
5. Forest	1,00,000

Their proposals in regard to items Nos. 1, 2, 4 and 5 will be accepted. As regards item No. 3, the Government observe that the grant originally sanctioned, *i.e.*, Rs. 3,75,000 has already been reduced by Rs. 50,000 (*vide* G.O., dated 21st May 1885, Mis. No. 2616), and they do not consider it prudent to reduce it any further. Considering the condition of the works and the pressing necessity for making them efficient, there cannot, in the opinion of Government be any doubt that the sum thus retained for expenditure, *i.e.*, Rs. 3,25,000, can be spent to the great advantage of the public revenue which is sure to suffer if the works are left in the condition in which they now are. The proposed expenditure will not only conserve revenue, but may be confidently expected to add to it. The Board will therefore countermand their orders to Collectors on this matter.

3. *Department of Revenue Settlement and Agriculture.*—The Government farm at Saidápet will, in terms of G.O., dated 5th May 1885, No. 532, be closed on the 1st September next, and the Director expects a saving of Rs. 7,670 on this account. It was intended to utilize the savings effected by the abolition of the farm in the entertainment and payment of District Agricultural Inspectors, but the Government consider that the appointment of these officers may be postponed for the present.

Mr. Price further proposes to effect a reduction of Rs. 10,930 in the Cattle Disease Inspection Department by giving effect from the beginning of the current official year to the proposal contained in the Director's letter, dated 1st April 1885, No. 546, recorded in G.O., dated 19th May 1885, No. 588. The question of policy involved in this proposal has not however been settled, and cannot be discussed at present. The charge in question must, therefore, continue to be debited to the Agricultural Budget.

The following reductions are proposed in the Revenue Settlement budget :—

	RS.
1. Reduction of the rate of pay of the officers of No. III party from 1st July next, to the level of the rates in other parties ...	1,456
2. Non-entertainment of the survey establishment for Wynaad ...	6,890
3. Saving of Mr. Wilson's personal allowance and Mr. Cox's salary.	7,319
4. Saving in No. III Party	1,260
5. Do. No. II do.	1,800
6. Do. No. I do.	3,700
7. Other savings	2,575
Total ...	25,000

As regards item No. 1, the Government consider that the proposal which would effect a very trivial saving need not be carried out. The men who draw the exceptional rates of pay are old officers to whom the old rates were continued by the express orders of Government (G.O., 11th April 1878, No. 575). With regard to item No. 2, it is observed that, without the establishment for which it provides, the Revenue Settlement of the Wynaad, ordered in G.O., 17th September 1884, No. 1049, and which, it is hoped, will be carried out during the next working season, cannot be proceeded with. The proposed retrenchment is therefore disallowed. The other items are approved.

The Director's recommendations in the concluding paragraph of his letter will be considered in the Public Department.

4. *Inam Department.*—The Inam Commissioner proposes to save Rs. 3,600 by dispensing with the Deputy Collector employed on the settlement of village service inams in the Bellary district, his establishment, and the extra establishment entertained on account of this work in the Central office. The Government think it very undesirable to make any reduction in the direction indicated. The work of the Special Deputy Collector should be continued, and the scheme for the revision of village establishments pushed on as rapidly as possible.

5. *Survey Department.*—The reductions proposed in this department are as follows:—

	RS.
No. I Party	30,000
No. III do.	15,000
No. V do.	30,000

and are accepted.

6. The Director of Government Cinchona Plantations, Parks and Gardens, reports that he can spare without difficulty and without detriment to the public revenue fully Rs. 10,000 from his budget allotment.

7. The reductions then in the several departments will be as under:—

	RS.
Departments under the Board of Revenue	5,03,000
Agricultural Department	7,670
Settlement Department	16,654
Survey Department	75,000
Cinchona Department	10,000
Total	6,12,324

Heads of departments concerned will revise their budget estimates for 1885-86 accordingly, and submit them for the sanction of Government.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Financial Department.
,, the Public Department.
,, the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Inam Commissioner.
,, the Superintendent of Revenue Survey.
,, the Director of Government Cinchona Plantations, &c.
,, the Accountant-General.

Exd. J. Wright.

150 Copies.

No. 1793

Communicated to the officers in charge of Settlement Parties, the Agricultural Reporter to to Government and the Inspector of Cattle Diseases for information and guidance.

962

The following reductions have been made in the Budget grant of Settlement Parties for the current year and Dy: Directors are requested to be careful to keep their expenditure within the grant as now fixed.

Items	Party No I	Party No 2.	Party No 3	Party No 5	Total
Dy: Director's Salaries	+2590	4900	u	u	2310
– Do – fixed tentage	u	610	u	u	610
Dressers	u	+387	160√	240	13
Asst. Director's Establishment	264	360	u	u	624
Classification – Do –	770	774	900√	300	2744
Contingencies & office rent	u	u	200√	u	200
Preparation of Settt. Registers.	3700	1053	500√	500	5753
Total	2144	7310	1760	1040	12254

The Agricultural Reporter is referred to para 3 of this office letter recorded in G.O. wherein the details of Rs 7670 now reduced have been given.

Ag: Director of Rev: Settt.
& Agriculture.

Department of Rev: Settt.
& Agriculture.
Madras 22nd June 1888

To
The Dy: Director of Rev: Settlement
Party No III

DM!

fr

Govt. of {1885} Madra

REVENUE.

Issued

Recd. *Enc*

G.O., 1st June 1885, No. 639.

JUNE.

Financial Reductions.

Orders passed on papers relating to — and heads of departments concerned directe to revise their budget estimates for 1885-8 accordingly.

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RECEIVED
10 JUL 85

15th June 1885, No. 727, Revenue.

Regd No

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—again G.O., dated 21st May 1885, Mis. No. 2603, Revenue.

Read—also the following letter from Colonel H. T. Rogers, R.E., Superintendent, Madras Survey, to the Secretary to Government, Revenue Department, dated Kullakamby, 3rd June 1885, No. 112-G :—

Referring to G.O., dated the 21st May 1885, No. 2603, I have the honor to forward copy of judgment in Sessions Case No. 44 of 1884 on the file of the Court of Session of the Salem division, against S. V. Krishnien, late Field Surveyor of this department.

2. No appeal has been preferred against the sentence of the Court.

Order—dated 15th June 1885, No. 727, Revenue.

Miscellaneous.

Ordered that S. V. Krishnien, late Field Surveyor in the Madras Survey Department, who was found guilty of forgery by the Sessions Court of Salem, be declared disqualified for further service under Government.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Superintendent, Revenue Survey, with judgment returned.
,, the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Inam Commissioner.
,, the Director of Government Cinchona Plantations, &c.
,, the Several Departments of the Secretariat.

Exd. W. H. French.

150 Copies.

No. 1912

Communicated to the Officers in charge of Settlement Parties, the Agricultural Reporter to Government and the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 4th *July* 1885.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No III
,, ,, Special Assistant Collector, Nilgiris and Malabar.
,, ,, Agricultural Reporter to Government.
,, ,, Inspector of Cattle Diseases.

Govt. of {1885} Madras

REVENUE.

Issued

Recd. *Enc*

G.O., 15th June 1885, No. 727.

JUNE.

S. V. Krishnien,

late Field Surveyor, Revenue Survey Departmen
declared disqualified for further service unde
Government.

RECEIVED 19TH MAY 1885, NOS. 586, 586A, REVENUE.

[illegible] JUL 85

2655

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following letter from J. F. PRICE, Esq., Acting Director of Revenue Settlement and Agriculture, to the Secretary to Government, Revenue Department, dated Madras, 29th April 1885, No. 753 A. :—

I have the honor to submit the report called for in the Proceedings of Government, No. 2480, dated 12th June 1884.

2. I enclose a statement giving, for each district separately, such information as I have been able to obtain upon the points alluded to in the circular of the Government of India, embodied in the order under reply. This includes a summary of the communications received from Collectors.

3. What one would call hay in England is not stored any where in the Presidency. The nearest approach to it is in the Kistna District where, in some villages of the Vinukonda Taluk, the grass growing in fields which are specially set apart for grazing purposes is cut between October and December and, after being dried, is stacked for use. In this district, also, the marsh and lunka grasses are similarly treated.

In parts of the districts of Nellore, Cuddapah, Anantapur and South Canara, the coarse grass growing on the hills is cut, dried and stored by the ryots. In Kurnool this is done only in times of scarcity. In South Canara alone, this grass is occasionally stacked with rice straw, on the ground that it improves the flavour of the latter.

4. In Madura only a crop (cholum) is said to be grown for use as fodder, but this does not appear to be an extensive practice.

5. The chief fodders are the dry straw of rice, ragi and varagu and the stalks of cholum. The last of these is very nutritious. The husks and stems of the various kinds of pulses appear to be, in some districts, considered, as they no doubt are, very valuable as fodder, whilst in others, as for instance Chingleput, Salem and Tanjore, but very little importance appears to be attached to them. The method of stacking the husks, &c., of pulses in vogue in the Kurnool District, *i.e.*, in alternate layers of pressed husk, &c., and rice or other straw, is worthy of notice, as is the practice existing in South Canara of giving this kind of fodder to cattle after boiling it in water in which rice has been washed.

6. In the district of Kurnool, alone, reference is made to wheat straw as an article of fodder. The Collector of Kistna mentions that the leaves of the *Zizyphus Jujuba* are gathered and dried and extensively employed to feed cattle, and that in the coast villages, the leaves of the mangrove tree are turned to a like use.

7. There is no particular system of stacking, excepting, perhaps, that existing in Malabar and South Canara. The central pole supporting a conical stack, described by the Collectors of these districts, reminds one of the stacks of the same description which one finds in the storm-ridden glens of the Highlands of Scotland. Elsewhere, there appear to be but two styles of stacks, the one circular, with a conical top, and the other rectangnlar, with a gable roof, both suggesting a good deal, in general outline, what one sees at home. The former is by far the more common, and the differences of shape in the various districts are very slight. In Coimbatore, which borders on Malabar, there is the rather curious peculiarity that, whilst the stacks of the cholum fodder are in the ordinary form, those of rice and other straw assume the shape to be found in Malabar, but without the central support.

8. No very great precautions seem to be taken in regard to protecting the bottom of stacks from vermine or damp. Sometimes they are built upon the ground itself, frequently so, where the straw is likely to be soon used: the utmost that is done is to make a foundation of sticks or bamboos, raised upon stones a foot or so high, but this is not common.

9. The building of stacks does not appear to be anywhere a matter of any great care. The material is always thoroughly dry before it is stored, so that there is no fear of the English farmers bug-bear "heating," and all that the Indian agriculturist has to look to is to make his stack sufficiently strong to stand high winds and sufficiently close to exclude water, and this he effects.

10. Collectors have mentioned very varying periods as those within which fodder is preserved. I, myself, do not believe that there is one blade of fodder ever kept for more than two years at the very outside. My own experience is that by far the larger portion of it is exhausted within a year after it is cut.

11. I transmit, herewith, a provincial sketch map * showing the tracts in which there are any differences in the mode of storing or stacking fodder. These, however, are very slight.

* Sent by book post.

ENCLOSURES.

STATEMENT showing the description of fodders stored in the several districts, the time when they are cut, stored and used, and the manner in which they are stored or stacked.

District.	Description of fodder.	Time when it is cut.	Period for which it is stored.	Period during which used.	Summary of Collector's reports.
1. Ganjam ..	1. Rice straw .. .. 2. Ragi do. .. .. 3. Varagu straw .. .. 4. Chaff or husk of black, green and horse gram.	December	Ordinarily up to March. The wealthy ryots keep the store for a year.	The dry months from March to July.	No hay is grown in the district; no hill grass is cut and stored; and no crops are raised for use as fodder. The only fodder stored in any quantity is rice straw. It is stacked in conical-shaped heaps, and there is nothing peculiar in the method of doing this. In the Chicacole Taluk ragi and varagu straw and the husks of pulses are used, but to a very limited extent.
2. Vizagapatam .	1. Rice straw	December and January ..	Stored generally for one year and sometimes for two or more.	Largely in the hot weather when pasture is scarce, and during the rainy season when cattle cannot go out for grazing.	Hay is not grown by the agricultural population of the district, but is cultivated by His Highness the Maharajah of Vizianagrum. No crops are raised with a view to using them as fodder alone. The chief fodders are rice and ragi straw and cholum stalk. There is nothing peculiar in the method of stacking, the fodder being merely placed in conical heaps made as solid as possible. The stacks are, however, sometimes raised on platforms which are either constructed on posts or else raised in a tree pollarded for the purpose; this is especially the practice in the Sowrah Hills. Cholum stalks are either piled on rocks or stored in the lofts of houses, and horse-gram, which is not largely obtainable, is stored under cover in wicker-work baskets.
	2. Cholum stalks ..	Do.	Generally for one year.	Do.	
	3. Ragi straw	First crop—October and November. Second crop—March to May.	For six months ..	Used throughout the year chiefly for non-working cattle, such as old cows, old bullocks, &c.	
	4. Cumbu stalks ..	September and October ..	For two years ..	Same as rice straw.	
	5. Vuda (a sort of black rice) and korra.	July and August	Not stored long as it is liable to rot soon	Soon after being cut.	
	6. Samai straw	October and November ..	For one year	Throughout the year, but is not an abundant supply.	
	7. Horse-gram husk, &c. .	January and February ..	Do.	Throughout the year but sparingly as a luxury.	
3. Godávari ..	1. Rice straw	October to December ..	Do.	In all seasons and especially in the rainy season.	Hay is never made. There is no special method of stacking straw, or of storing fodder in this district. The chief kinds of fodders used are rice and varagu straw and cholum stalks. The first two are merely trodden by cattle, dried for a short time, and then made up in conical heaps in backyards or other convenient places. The cholum stalks are, after the heads of grain have been cut from them, dried for a fortnight, and then heaped in fields or the ryots' backyards.
	2. Cholum stalks	December to February ..	For six months ..	From April to June.	
	3. Varagu straw	January and February ..	For three months ..	In the hot season.	
	4. Samai do. .. .. 5. Korra do. .. .. 6. Ragi do.	August to October ..	....	Soon after being cut.	
	7. Hemp stalks and leaves.	February and March ..	Till the commencement of the first rains.	Generally in hot weather.	
	8. Pulses, *i.e.*, chaff, &c., of the— i. Red-gram .. ii. Cow-gram .. iii. Green-gram .. iv. Black-gram .. v. Bengal-gram .. vi. Horse-gram ..	January and February.	For about seven months.	In July and August.	The chaff of pulses is stored in the ryots' houses. The stems of the hemp plant (*Crotolaria juncea*) are said to be used as a fodder in this district. It is stored in bundles and covered over with straw or palmyra leaves to protect it from rain. No crop is grown specially as fodder. The pods of the babul (*Acacia Arabica*) are gathered in January and February and used to feed cattle. They are not stored.

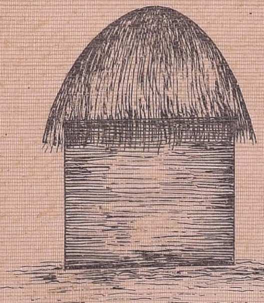
Statement showing the description of fodders stored in the several districts, &c.—(*Continued*).

District.	Description of fodder.	Time when it is cut.	Period for which it is stored.	Period during which used.	Summary of Collector's report.
Godávari—(*Continued*).	9. Arika straw	September to November ..	For seven or eight months.	From February to June when green grass is not available.	
	10. Maize straw	September	....	For a month after being cut.	
4. Kistna ..	1. Rice straw .. .. 2. Cholum stalks .. 3. Gidda jonna stalks (variety of cholum). 4. Maize stalks .. .. 5. Sajja stalks (cumbu). 6. Korra straw .. .. 7. Arika do. .. .. 8. Varagu do. .. .. 9. Karu jonna stalks (black cholum). 10. Tamida straw (ragi).	Between July and December.	One to two years. In the delta taluks the chief fodder stored is "wet paddy," which is kept for only six months.	Summer and winter when pasturage becomes scarce.	In some villages of the Vinukonda Taluk of this district the grass which grows in fields set apart for grazing purposes is cut between October and December and, after being dried, is stacked for use. In other parts of the district marsh and lunka grasses are similarly treated. The chief fodders are rice straw and the stalks of cholum; the former is almost exclusively used in the delta taluks. There is nothing peculiar in the mode of stacking. The pods of pulses and cotton seed are stored for fodder. The Collector mentions that the dried leaves of the *Zizyphus Jujuba*, which are gathered in December and January, are extensively used for feeding cattle, and that the leaves of the mangrove tree are, in the coast villages of the Répalle and Bandar Taluks, employed for the same purpose. No crop is raised especially as fodder. Cattle are fed in January and February on babul pods which are, however, not stored.
	11. Husks, &c., of— i. Horse-gram .. ii. Red-gram .. iii. Green-gram .. iv. Bengal-gram .. v. Cow-gram .. vi. Anumulu ..	March	Six months to a year.	....	
	12. Janumu (hemp) ..	....	....	....	
	13. Cotton seeds ..	....	....	....	
	14. Rellu grass (botanical name not known).	....	....	....	
	15. Leaves of the Regu tree (*Zizyphus Jujuba*).	December and January ..	....	....	
	16. Leaves of the mangrove.	....	....	....	
5. Nellore ..	1. Jonna or cholum stalks	December	Eight months ..	From February to September.	No hay is grown, but the coarse grasses obtainable on the Vellikonda Hills in the Darsi, Podili, Kanigiri, Udayagiri, Atmakúr and Rápúr Taluks, are cut and stored for use during the months, August—March. There is no special method of stacking or preserving fodder. The chief fodders used are the straw of varagu and rice and cholum stalks, which are gathered in convenient spots into conical heaps, and these are fastened across the top with roughly twisted ropes of the same material as the stack contains. The fodder derived from the shells of the various pulses is considered very nutritious and is carefully stored by the ryots. No crop is raised for fodder alone.
	2. Varagu straw ..	February			
	3. Ragi do. ..	December			
	4. Sanna vari straw (variety of paddy.)	February			
	5. Husks of— i. Red-gram .. ii. Black-gram .. iii. Horse-gram .. iv. Bengal-gram .. v. Green-gram ..	From January to April.	For four or five months after they are cut.	From September till the end of November.	

	Straw of—				
	6. Valanda vari (rice)	October	Eight months	February to September	
	7. Mosanam (rice)				
	8. Korra				
	9. Iswara (rice)	March to April	Six or seven months	When green grass is not available.	
	10. Cotton seeds	Do. and May	Do.	Do. do.	
	11. Straw of—				
	i. Kesary (rice)	April	Do.	From May.	
	ii. Pishanam (rice)	February or March	One year	From March or April.	
	12. Sajja (cumbu) stalks.	October	Eight months	February to September.	
	13. Arika straw	December			
	14. Nalla vari straw (rice)	May or June	One year	July.	
	15. Tiruviraraya (rice) and	February or April	Do.	March or April.	
	16. The following wild grasses— Vooba Chengani Garika Gunaga Chipparu (botanical names not known).	August	From the time of cutting until March.	From August until March.	*N.B.*—The several fodders in this list are arranged in the order of their importance.
6. Cuddapah	1. Rice straw	January or February	Three years	The hot weather, *i.e.*, from the beginning of March to the end of July.	No hay is grown. The poorer classes cut the hill grass in considerable quantities and use it as a kind of hay. They, however, do not store much at any one time. The cattle are chiefly fed upon the dry straw of rice and ragi and cholum stalks. These are stored by building circular stacks of no great size, with sheaves of the straw placed with the buts outwards. The tops of the stacks are conical. They are occasionally on the ground itself, but where white-ants prevail, they are constructed on beams of wood supported by stones a foot or two high. The pods of pulses are used for fodder and are stored in the ryots' houses. No crop is raised for fodder alone.
	2. Cholum stalks (raised on dry black cotton soil).	Do.	Two years	Do.	
	3. Cholum stalks (raised on irrigated garden lands).	August or March	One year	Do.	
	4. Ragi straw	March	Do.	Do.	
	5. Sajja (cumbu) stalks	September	Do.	Do.	
	6. Korra straw		Two years		
	7. Pulses	From November to February.	One year	Do.	
7. Anantapur	1. Rice straw 2. Korra straw 3. Cumbu stalks 4. Ragi straw 5. Cholum stalks 6. Also pods, husks, &c., of— i. Horse-gram ii. Green-gram iii. Red-gram iv. Bengal-gram and other pulses.	....	About a year and sometimes for longer periods.	About a year and sometimes longer.	No hay is grown. The coarse grasses growing on the hills in the Hindupur and Dharmavaram Taluks are cut in the months of December, January and February, dried and stacked for fodder. The chief fodders are paddy and ragi straw and cholum stalks. The shells of pulses are also said to be stacked, but the mode in which this is done is not stated. The form of stack is that usually to be found, viz., circular, with a conical top, and built of bundles of straw tied together and laid one on top of the other with the lower ends outwards. No crop is raised for cutting as fodder.
8. Bellary	1. Rice straw	First crop in the later part of November and early part of December. Second crop in April or May.	Not more than a year, as the fodder is generally consumed before the next harvest.	When pasturage in jungles, &c., fails.	No hay is grown. The chief fodders are cholum and cumbu straw or rather stalks and rice straw. There appears to be no particular mode of storing this straw. It is merely stacked in the ordinary native way in circular heaps with a conical top. The Collector makes no mention of any fodder derived from pulses. No crop is raised in view to cutting it for fodder.

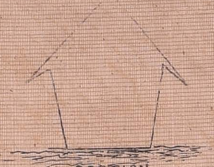
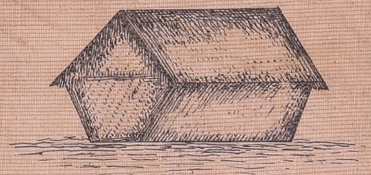
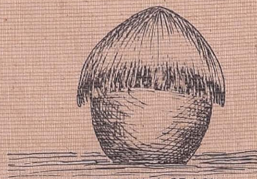
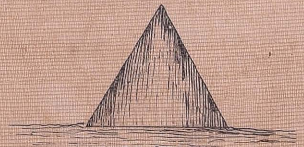
Statement showing the description of fodders stored in the several districts, &c.—(*Continued*).

District.	Description of fodder.	Time when it is cut.	Period for which it is stored.	Period during which used.	Summary of Collector's reports.
Bellary (*Continued*).	2. Korra straw .. 3. Cumbu stalks .. 4. Cholum do. ..	Between 15th September and 15th November for the *Munjeri* or earlier crop, and about 15th March for the *Hinjeri* or later crop.	Not more than a year, as the fodder is generally consumed before the next harvest.	March, April and May when green forage cannot be procured.	
9. Kurnool ..	1. Stalks of white cholum.	January, February and March.	One year and in some cases two years.	In hill villages these fodders are used up to the time that green forage becomes available.	No hay is produced in this district. Hill grass is cut, dried and stored only in times of scarcity. The chief fodders are cholum stalks, rice straw and a mixture made of the husks, leaves and stalks of pulses mixed with layers of straw and consolidated by pressure. The memorandums as to the mode of stacking, &c., in the Kurnool District forwarded by the Collector are, particularly that written by the General Charge Deputy Collector, so interesting that they are submitted *in extenso*. The method of stacking in vogue appears to more closely approach the English than anything to be found in the rest of the Presidency. In this district alone is mention made of wheat straw as an article of fodder. No crops are grown for exclusive use as fodder.
	2. Stalks of yellow cholum.	October, November and December.			
	3. Cumbu stalks ..	Do.			
	4. Korra straw ..				
	5. Ragi do. ..				
	6. Wheat do. ..	February and March ..			
	7. "Pottu" or conglomerated husks, leaves, &c., of—. i. Bengal-gram .. ii. Horse-gram .. iii. Green-gram .. iv. Black-gram ..	November and December or January and February.			
	8. Rice straw ..	May and November in double-crop villages, and November and December in single-crop villages.			
	9. Arika straw ..	November and December.			
	10. Varagu straw ..	February ..			
10. North Arcot.	1. Rice straw ..	From November to January; also in April to July.	Two or three years or longer.	All the year round.	No hay is grown, and hill grass is not cut and stored as fodder. The straw of rice and ragi and cholum stalks are the chief fodders. There is no particular system of storing. The straw is stacked in conical heaps which are placed on a layer of bamboos or timber or else on a bed of sand or ashes. The material is loosely packed and then roped over. The straw gathered from the crops (rice) harvested during the hot weather is considered the best. The husks of grain and other pulses are stored under cover, either in large bamboo baskets or else they are placed in the lofts of the ryots' houses. Rice and ragi straw are said to improve much with keeping; that of other varieties deteriorates.
	2. Ragi do. ..	August to December and February to April.			
	3. Cumbu stalks ..	September to February ..	....	Hot weather, *i.e.*, from April to the end of July or August.	
	4. Cholum do. ..	December and January; also April, June and July.	A year.		
	5. Varagu straw ..	January to April ..			
	6. Samai do. ..	January and February and in some places in September and October.	From three to six months.		
	7. Tenai do. ..	January and February ..			
	8. Husks of— i. Black-gram .. ii. Red-gram and .. iii. Of the several beans				
11. Chingleput ..	1. Rice straw ..	First crop, January and February. Second crop, May.	Never more than a year.	As soon as grazing begins to fail, *i.e.*, from March to August, and later if the supply continues.	No hay is grown by the ryots. Very good and abundant hay from the hariyali grass has, however, been produced at St. Thomas' Mount and the district jail. No crops are specially raised as fodder. The introduction of Guinea grass has been attempted, but as yet with but very little success.
	2. Ragi do. ..	April and May.			
	3. Varagu straw ..	January and the early part of February.			

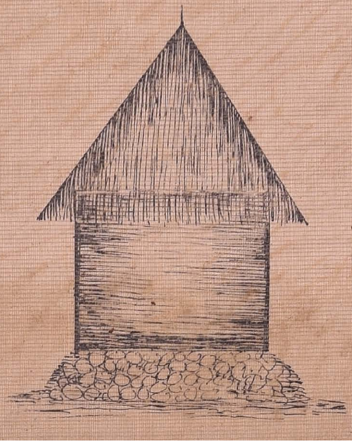
12. South Arcot.	1. Rice straw	*Samba.*—January to March. *Kar.*—April or May. *Arikar.*—September or October.	One year.	After grazing fails, *i.e.*, from April to about the end of August.	Rice straw is the chief fodder. Varagu and ragi straw are also used, but in no very considerable quantity. The husks of pulses are not stored. The cattle eat them almost as soon as collected. The mode of stacking has nothing peculiar about it, the straw being generally "cocked" in conical heaps in the ordinary way. The stacks are usually placed upon the ground at threshing floors or in the ryots' backyards, but occasionally, and especially where stacks are built somewhat after the English shape, they are supported upon a layer of bamboos and sticks placed upon stones. No hay is grown in this district, and hill grass is not cut and stored for fodder. The chief fodders are rice, ragi and varagu straw and the stalks of cholum. There is no particular method of preparing or stacking. The rice when harvested is threshed by being well trampled by cattle driven in a circle over the harvested crop, which is spread out on a hardened floor. The straw is then allowed to dry for two or three days and afterwards tied up into convenient bundles which are arranged either on the hard ground of the threshing floor or else on stones or bricks, with wood placed over them. The stacks are usually circular. The bundles of straw are loosely packed and then the top is finished by opening bundles of straw and scattering it on the body of the stack, building it up in a conical shape. The structure is then finished by binding it cross-wise with ropes of straw which are fastened into the sides of the stack, the shape of which is as shown in the margin.  Stacks of the cholum stalk are built in the same manner as described above, and are covered over with straw. The husks, leaves and stems of the ground-nut are used as fodder and considered very nutritious. They also are stacked and protected by a straw covering. No crop is grown for use as fodder alone.
	2. Varagu straw ..	December or January ..			
	3. Cholum stalks ..	*The Mukkattai variety.*—December or January. *The Sengattai variety.*—April or May.			
	4. Ragi straw ..	1. August and September. 2. December and January. 3. March and April.			
	5. Husks, &c., of ground-nut plants.	January and February.			
	6. Also the straw of *millet* and *samai* and the husks of horse, black and green grams.				
13. Tanjore ..	1. Rice straw	*Kuruvaikar.*—October to December. *Samba*—January to March.	A year	Immediately after being cut, and throughout the year.	No hay is produced, nor any crops raised for fodder alone. The principal fodders are rice and ragi straw, which is stacked, as in the surrounding districts, in a conical form with the side of the stack bulging slightly outwards. The husks, &c., of pulses are used as fodder for cattle but not stored.
	2. Varagu straw	....	Do. ..		
	3. Maize stalks	....		All the year round.	
	4. Ragi straw and	....			
	5. The husks, &c., of ground-nut.	....			

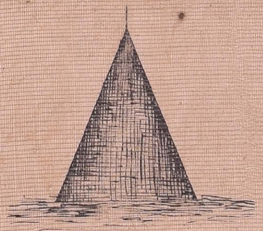
Statement showing the description of fodders stored in the several districts, &c.—(*Continued*).

District.	Description of fodder.	Time when it is cut.	Period for which it is stored.	Period during which used.	Summary of Collector's reports.
14. Trichinopoly.	1. Rice straw	*Samba.*—January and February. *Kar.*—October and November. *Kodaikar.*—February and March.	Lasts for two years without deteriorating. Lasts for one year.	Two months after storing and so long as the supply lasts.	No hay is grown; no hill grass is cut and dried; no crops are raised in view to use solely as fodder. The chief fodders of the district are rice and varagu straw. Ragi straw and cholum stalks are also produced, but not in such large quantity as the others. The husks and leaves of pulses are used as fodder, are covered over with straw to preserve them from rain, and are doled out in small quantities as they are considered very valuable. The mode of stacking has nothing worthy of special notice about it. The straw after being spread and dried for a few days is put up in a large circular heap with a rounded top of the description to be found in most parts of the Presidency.
	2. Varagu straw	December and January ..	Will not keep beyond ten or twelve months.	After three months from the time of storing.	
	3. Cholum stalks .. .. 4. Ragi stalks	....	Will keep for about twelve or fifteen months.	....	
	5. Husks, &c., of ground-nut, gram, dholl and other pulses.				
15. Madura ..	1. Rice straw	January and February ..	About a year ..	Generally the ryots begin to draw upon these heaps from the month of April, and use the fodder very sparingly until September. From October, which is the commencement of the ploughing season, they give fodder to their cattle more liberally, both day and night. From December to February, which is the time of harvest, cattle are allowed to graze during the day on the grounds the crops on which have been cut, and no fodder is given even during the nights.	No hay is grown in this district, and hill grass is never cut and stored. Cholum is, however, grown in parts of the taluks of Tirumangalam, Palni and Dindigul, and cut and used as fodder. This is done in the months of July and August. The principal fodders are rice, samai and varagu straw and cholum stalks. There is nothing remarkable in the way of storing. The straw is made up into what the Collector calls "oval" stacks, which are apparently of the same shape as in the South Arcot and many other districts. These are but seldom thatched; occasionally stacks are built somewhat after the English shape, *i.e.*, with rectangular body and gable roof. Cholum stalks are stored on a layer of stones in order to protect them from white-ants. The pulses are not mentioned by the Collector, and would seem not to be used except, possibly, when quite fresh.
	2. Samai straw .. .. 3. Varagu straw .. .. 4. Cholum stalks.. .. 5. Ragi straw .. .. 6. Kudirivali (variety of rice) straw. 7. Cumbu stalks	November to January ..			
16. Tinnevelly ..	1. Rice straw	*Kar.*—September to November.	....	From October to March.	Hay is not produced. Hill grass is not cut and stored, nor are any crops raised especially as fodder. The chief fodders are rice and ragi straw and the stalks of cholum and cumbu.
		Samba.—January to March.	Generally for one year and sometimes for two years. In some places it is said to be stored even for three or four years.	From March to October.	
	2. Cholum stalks.. ..	January to March ..	....	September to November.	
	3. Cumbu do.	February to April ..	....	July to September.	
	4. Ragi straw	November to March ..	....	February to October.	

	5. Varagu straw	December to February ..		Nos. 5 to 9—From November to February. The use of these fodders is not, however, restricted to the above periods, but it is then that they are chiefly used.	No mention is made by the Collector of the use of the husks, &c., of pulses. The straw is stacked on open ground in rectangular ricks of the shape shown in the margin; these are occasionally thatched, but more frequently not. Cholum stalk is considered the best fodder for cattle in this district, and is valued more than any other description.  SECTION 
	6. Samai do.	December and January ..			
	7. Tenai do.	March and April			
	8. Kodaikannu (rice) straw.	December and January ..			
	9. Kudirivali (rice) straw.	March and April ..			
17. Coimbatore.	1. Rice straw .. .. 2. Cholum stalks .. 3. Ragi straw .. .. 4. Samai do. .. .. 5. Cumbu stalks .. .. 6. Tenai straw .. .. 7. Dried stems and pods of the pulses.	The crops are generally cut in— (1) November to February or March. (2) July to September or October.	Will remain good for about three years. Do not last longer than three months.	When the green grass fails in the fields, *i.e.*, from about March to June and when the cattle are engaged in ploughing.	No hay is grown, and no hill grass is cut and stored excepting in exceptionally bad seasons. The chief fodders of the district are rice and ragi and samai straw and the stalks of cholum. There is nothing peculiar in the method of stacking excepting that the shape of the stacks of straw differs from that of cholum stalk (*vide* sketch in the margin). The stems and pods of pulses are used for fodder almost directly after the harvest, and until then are stored in enclosures formed of bamboo hurdles. No crop is raised for the purpose of using it exclusively as fodder. The above is the description given by the Collector. With this report is submitted a copy of an interesting account of the process of stacking cholum stalk in the villages of Gúdalúr and Karúr in the Coimbatore District written by C. K. Subba Rau, late Deputy Superintendent of the Government Farm, Saidápet.  CHOLUM STACK  OTHER STACKS This differs considerably from what has been written by the Collector. It is probable that both methods of stacking are followed, and the Collector has only mentioned that which is the most common.

Statement showing the description of fodders stored in the several districts, &c.—(*Continued*).

District.	Description of fodder.	Time when it is cut.	Period for which it is stored.	Period during which used.	Summary of Collector's reports.
18. Nílgiris ..	1. Samai straw .. .. 2. Karali do. (korra) ..	October and November.	Four or five months	The dry season—from March to about the end of June.	No hay is grown. The fodder used is the straw of samai and karali which is merely piled in heaps and fenced round in order to prevent cattle from reaching it. There being usually ample pasture on these hills all the year round, but little importance is attached by the people to storing fodder, and no crop is grown with the view of using it for this purpose.
19. Salem ..	1. Rice straw .. .. 2. Ragi do. .. .. 3. Samai do. .. .. 4. Varagu do.	November to January ..	About six months ..	Hot weather, *i.e.*, April and May: in October when standing crops are to be protected from the cattle and in the ploughing season when the new green grass is injurious to the working cattle.	No hay is stored by the people. Hay of excellent quality is, however, grown at the Government Remount Depôt at Hosúr. No hill grass is cut and stored, and no crops are grown specially for fodder. The principal fodders are the straw of rice, ragi, varagu and samai. The second of these is extensively used in the upland taluk of Hosúr which is of large area. There is nothing peculiar in the method of stacking. The straw is, after being dried, packed on a basement formed of junglewood placed on stones in a circular stack with a conical top, and this is constructed either in the owner's field or else close to the threshing floor. No mention is made of pulses.
20. South Canara.	1. Rice straw.	First crop—September and October. Second crop—January and February. Third crop—May and June.	There seems to be no definite period. The straw is stored for a short time after it is gathered, and then drawn upon until exhausted. No stack seems to be retained more than a year at the outside.	First crop straw— Used throughout the year except when green forage is available. That of the second crop from five months after the harvest.	No hay is grown. Hill grass is cut in November or December, and after being dried for a few days and being, whilst this is going on, protected from the night dew, is stacked in the same manner as rice straw. It is, as a fodder, used sometimes alone, as in parts of the Coondapoor Taluk, and at other times it is mixed with rice straw, with which also it is occasionally stacked, it being thought to improve the flavour of the straw. Rice straw is the principal article of fodder. The process of stacking is as follows. A raised spot, free from damp, is selected, and in the middle of this a long pole or stout bamboo is planted in a verticle position. The straw is then piled regularly round this pole, in thick, close layers, until the top of the pole is nearly reached, when the stack is finished off by forming a conical closely-packed roof, which is completely waterproof. The form of the stack is as in the margin. The straw is alway kept some five months prior to being used, as it is considered that, unless thus seasoned, it is injurious to cattle. 
	2. Hay made of hill grass.	....	....	...	
	3. Fodder made of the stalks of the different dry grains and the husks of the pulses.	Gathered at harvest.	Two or three months.	....	

21. Malabar ..	Rice straw	*Kanni crop.*— September and October. *Makaram crop.*—January and February.	Five or six months ..	As long as the supply, which is drawn on as soon as the hot weather begins, lasts.	The leaves, stems and husks of the pulses are stored under cover and used chiefly during the monsoon as fodder, they being, when this is done, boiled in water in which rice has been washed. The only fodder stored in this district is rice straw. No hay is grown and no hill grass cut and stored. The method of stacking is, after the straw has been well dried in sheaves, to either pile it around a tree or to fix a strong pole in the earth, supported by props, around which the straw is packed so as to form a conical stack of the shape shown in the margin.  No crop is grown exclusively for fodder.

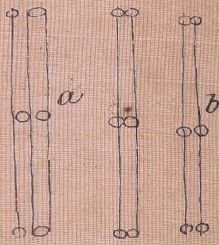
MADRAS,
29th April 1885.

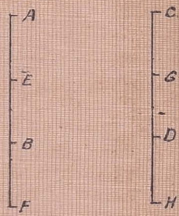
(Signed) J. F. PRICE,
Ag. Dir. of Rev. Sett. and Agriculture.

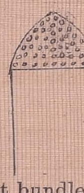
Letter from M.R.Ry. C. K. SUBBA RAO, to the Agricultural Reporter to Government, dated Saidápet, 23rd February 1885.

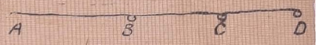
With reference to your Memorandum No. 1066, dated 15th August 1884, I have the honor to submit the following information about the method of storing fodder in Coimbatore, my observations and inquiries being confined to the practices in the Gúdalúr and the Perúr villages.

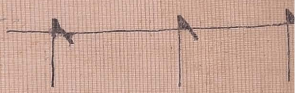
2. *Cholum* (*Sorghum vulgare*).—The unirrigated variety is generally harvested about the beginning of January. The ear-heads are first cut and the straw immediately afterwards. This is allowed to dry on the field for a day or two and not longer, so that the straw may retain a small quantity of sensible moisture at the time of stacking. The fodder is stacked on the field provided this is not very far from the ryot's house. Boulders are arranged on the ground in 3 or 4 rows, the whole forming a rectangle; and one or more branches of trees or scantlings of wood are laid over the boulders, as shown in annexed figure. The stack is built on the stand thus provided. The cholum straw having been tied into bundles of about four feet in girth at the middle, two bundles are first laid longitudinally at *a* and *b*, and two other bundles are laid opposite to those previously laid so that their tapering ends overlap each other, thus causing a uniform surface level. In the annexed figure, A B and C D represent the bundles first laid with their butt ends at A and C. E F and G H are the second set of bundles with their butt-ends at F and H. A bundle is then laid transversely with its butt-end at A resting on the longitudinal bundle. Another bundle is laid transversely with its butt end at C, so that its tapering end may overlap that of the opposite bundle and thus a series of overlapping bundles are laid in the same manner so as to form the first course of the stack. Several such courses are built by laying the bundles transversely so that their tapering ends may overlap each other, causing a level surface, until the pile is about 5 or 6 feet high. Over the stack built thus far, bundles are put longitudinally so as to form a gable, a strip one foot wide being left on both the sides as shown in the figure. Two men get upon the stack and thatch the gable by putting bundles of straw, moving gradually onward along the strips as the work in each part is finished. The cholum stalks themselves are made to serve the purposes of thatching material, reepers, nails and ropes. The manner of putting on the reepers is as follows:—After 2 or 3 bundles of straw are laid leaning against the pile of longitudinal bundles, two cholum stalks are driven, one at each of the exterior bundles, about two feet deep into the stack. The first stalk is then bent and laid across the bundles and its free end is stuck into the last bundle after being twisted round the other cholum stalk; 2 or 3 more bundles of straw being then laid, another cholum stalk is driven into the stack near the last bundle, the second cholum stalk being bent and laid across the bundles in the same way as the first. The manner in which the cholum stalks are made to bind the thatch is shown in the annexed figure. A, B, C, and D being the points at which the stalks are stuck in the stack. It will be observed that the cholum stalks being somewhat sensibly moist are pliant enough for the purpose. Reepers are thus put on, on both sides of the stack. If the thatch be observed to be loose at any time, one or two palmyra reepers are put on and fixed by forked sticks being driven into the stack, as shown in the figure. Fodder is generally taken transversely from the stack as often as it is required and the reposed parts of the longitudinal bundles are cut. The fodder is said to keep well for about a year and half and then becomes mouldy. The fodder is chiefly consumed in the dry weather when the growth of grass on the hill side is checked. In the rainy weather fodder is sparingly given as grass is then abundant. The ryots do not seem to recognize that such grass is generally injurious. The stack, it is said, never gets heated.







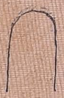




3. *Garden cholum or the irrigated variety.*—It is very interesting that the ryots of Gúdalúr whose working cattle are generally better than those generally used in the Presidency grow small plots of cholum for green fodder. For this purpose they sow the unirrigated variety of cholum and water it. Generally it rushes to stem and leaf. The fodder crop

is called in Tamil Adai pyir (அடைப்பயிர்). This is, of course, not stacked. I am sorry that I did not gather information about the corn crop of garden cholum. I believe it is sown in April or May and the straw is stored in the same way as the straw of the field variety.

4. *Field ragi or the unirrigated variety.*—It is only the straw of field ragi that is stacked. In January the crop is generally harvested. The straw together with the ear-heads is cut, and after drying for a day or two, is piled into a conical stack, the ears being turned inwards. The stack is allowed to stand thus generally till May or June. The grain is then thrashed. After providing the same sort of stand as for the cholum stack, the straw is piled into a heap having a somewhat oval section. At the top of the stack the ragi chaff is generally put.



5. *Garden ragi.*—Only the ear-heads of this are cut and the straw is allowed to be grazed by cattle.

6. *Cumbu* is seldom used for fodder, but is used for thatching. When the crop fails to mature for want of rain, it is allowed to be grazed.

7. *Paddy.*—No stand for the hay-stack is generally provided. The straw is simply thrown in a heap and well trodden so as to make it compact, and a stack is thus built having a somewhat oval section. Ropes are then twisted out of the straw itself and are passed over the stack from one side to the other, at intervals, the ends of the ropes being simply stuck in the mass of hay near the ground. These ropes serve to bind the stack until it is well settled and then the ends of the ropes are generally found to be free, the ropes lying simply like loose garlands.

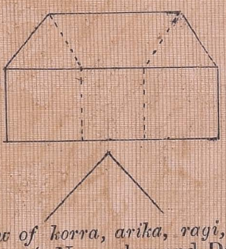
MEMORANDUM from J. HEWETSON, Esq., Acting Head Assistant Collector, Kurnool.

The following kinds of fodder are obtainable in the two taluks of the Nandyâl division.

1. Rice straw.
2. Choppa (stalks) of jonna (cholum).
3. Straw of korra, arika, ragi, bariga and wheat.
4. Pottu or conglomeration of chaff, leaves and other stuff of different kinds of pulses, such as bengal-gram, dholl, green-gram, black-gram, and horse-gram.

Process 1.—The straw with grain is cut twice a year in May and November in double-crop villages and only once in November and December in single-crop villages and exposed to the sun for about four or five days on the field and then removed to the thrashing floor where grain is separated from the straw and the latter made into small bundles is piled into a heap.

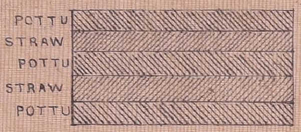
2. *Choppa or cholum stalk.*—When the cholum crop is ready for harvest, the ears are cut first, *i.e.*, the early one in November and December and the later in January and February, and immediately afterwards the stalks at 4 inches above the ground. The stalks thus cut are tied up in small bundles and allowed to dry in the field from 10 to 15 days. After it is perfectly dry, the choppa is collected and brought to the straw-yards. The ground will then be cleared of earth and bushes and a layer of coarse or useless stalks of about one foot high is spread on the ground to prevent choppa from being spoilt by white ants, &c. Over this layer are arranged the small bundles of the choppa in a pile to a height varying according to the quantity of the stuff to be piled, from 5 to 8 feet. The length and breadth of each stack also varies similarly, but does not exceed 40 and 3 yards respectively. Over this large pile, a small one is so arranged as to allow of a rectangular thatch as shown in the margin to be put over it in order that the whole choppa may be secured from rain.



3. *Straw of korra, arika, ragi, bariga and wheat.*—The first three crops are generally cut in the months of November and December and the 4th and 5th in February. The process of harvest and of separation of grain is the same as that observed for paddy with the difference that the straw with ears when cut, is tied in small bundles and exposed to the sun. After separation of grain, the straw is piled in heaps and allowed to wait till the 4th class of fodder is ready for storage.

4. *4th-class pottu or conglomeration of different kinds of pulses.*—These crops will be ready for harvest in the months of November and December and January and February according as they are sown with the earlier and later jonna. When the crop is ready, the plants are pulled out of the ground and collected in small heaps which are allowed to dry in the field from three to

five days. These small heaps are then collected and removed to the thrashing-floor where the grain is separated, and the residue consisting of chaff, leaves, &c., is piled in heaps. This conglomeration and the straw (3rd class of fodder) are then piled alternately as shown in the margin, and over it an angular thatch of choppa or, where available, straw is put to secure the fodder from rain.



Fodder thus stored is considered sufficient for the term of one year in 95 per cent. cases. Those land-holders who have more fodder at their disposal generally sell the excess to others.

In hilly villages cattle are fed on the preserved fodder till green grass is available : when they are fed on the latter and the unused fodder is preserved for the next season.

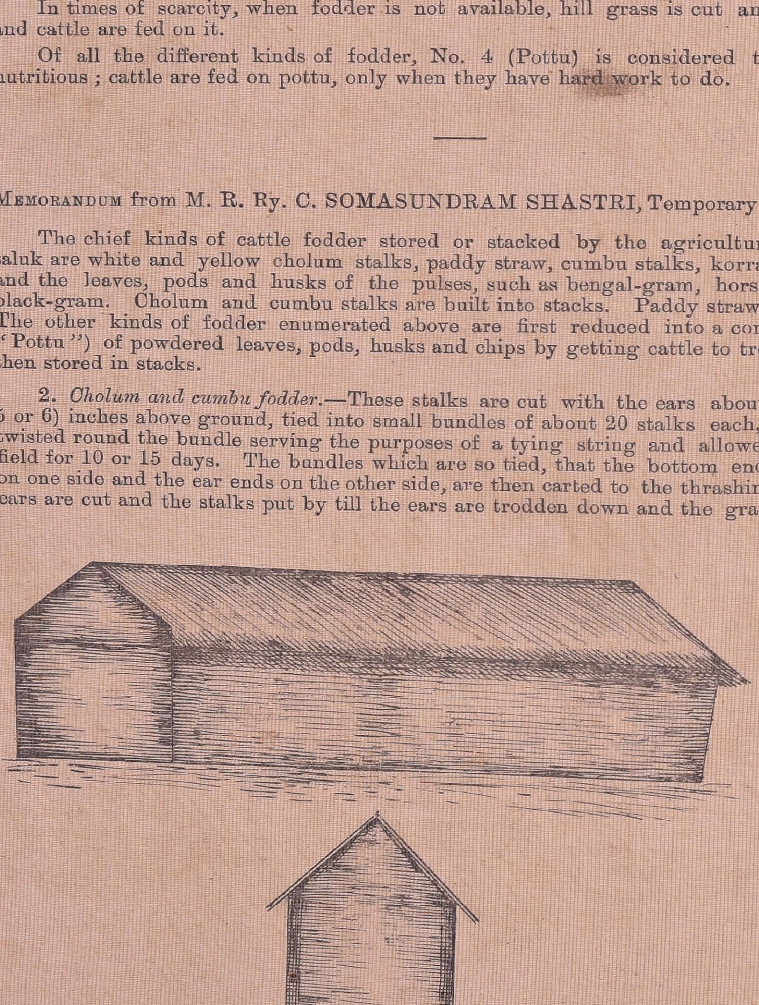
In times of scarcity, when fodder is not available, hill grass is cut and dried and stored and cattle are fed on it.

Of all the different kinds of fodder, No. 4 (Pottu) is considered the best and most nutritious ; cattle are fed on pottu, only when they have hard work to do.

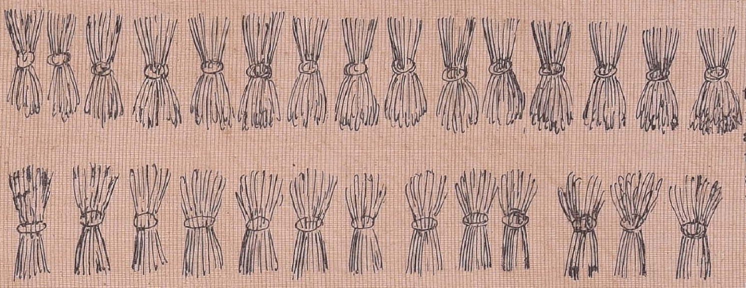
Memorandum from M. R. Ry. C. SOMASUNDRAM SHASTRI, Temporary Deputy Collector.

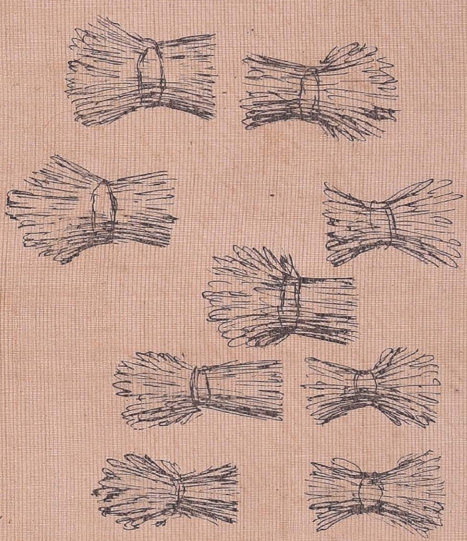
The chief kinds of cattle fodder stored or stacked by the agricultural classes in this taluk are white and yellow cholum stalks, paddy straw, cumbu stalks, korra and wheat straw, and the leaves, pods and husks of the pulses, such as bengal-gram, horse-gram, green and black-gram. Cholum and cumbu stalks are built into stacks. Paddy straw is merely heaped. The other kinds of fodder enumerated above are first reduced into a conglomerate (called "Pottu") of powdered leaves, pods, husks and chips by getting cattle to tread over them and then stored in stacks.

2. *Cholum and cumbu fodder.*—These stalks are cut with the ears about a few (generally 5 or 6) inches above ground, tied into small bundles of about 20 stalks each, one of the stalks twisted round the bundle serving the purposes of a tying string and allowed to be about the field for 10 or 15 days. The bundles which are so tied, that the bottom ends are all gathered on one side and the ear ends on the other side, are then carted to the thrashing-floor, where the ears are cut and the stalks put by till the ears are trodden down and the grain removed. The stacking of the stalks now begins. The stacks, when completed, have the marginally sketched appearance. The dimensions of the stacks, which are generally built with their longer side extending from east to west, depend entirely upon the quantity of stacks available for storage. The maximum width of a stack is 2½ fathoms ("Báridús") and the minimum 7 feet. The length varies from 9 to 54 feet, and is sometimes even longer. The height rarely exceeds 15 feet. Operations are begun by tying up the smaller bundles into larger ones of about 6 feet in circumference. Two rows of these large bundles are first laid on the ground side

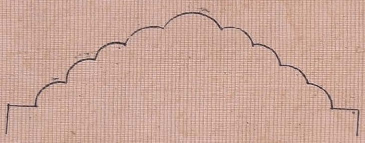


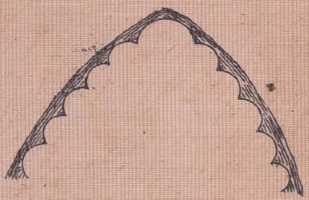
by side up to the required length, a narrow opening being felt between the rows. The bundles are so placed that the bottom ends face outwards and the ear ends lie inwards as in the margin. Over these two more rows of bundles are arranged with the ends reversed and pushed inwards a few inches so that the bottom ends may dovetail into each other over the opening running between the two lower rows, an edging about 6 inches wide being left on the sides. A fifth row of bundles is now put over these layers right over the central opening, and well pressed into it with legs by people who get over the heaps for the purpose. Two layers of small bundles are then arranged along the eastern and western rims of the heap with the bottom ends facing outwards, *i.e.*, east and west. The edges 6 inches wide left along the northern and southern sides are also filled up with small bundles ranged lengthwise, one behind another with the bottom ends all facing eastwards, so that the upper surface of the heap may, as nearly as possible, be of a uniform level throughout. The compact rectangular block thus formed serves as the foundation of the stack. Upon this several similarly arranged blocks, varying in number from five to eleven, are built according to the quantity of stalk available for stacking. The platform (or "gadda" as it is called) thus constructed is surmounted by what is called the "sonta" which consists of a number of large bundles ranged lengthwise, one behind another along the entire length of the heap parallel to its length and rising in tiers gradually to a ridge of single bundles put one behind another. In the construction of the "sonta" the bundles are all so arranged that their bottom ends may face the east except those at the westernmost end





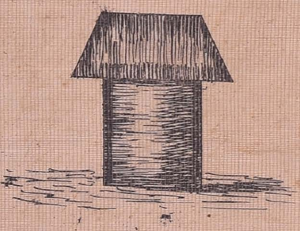
which are made to face the west. A cross section of the "sonta" is annexed in the margin. The "sonta" is next covered with a roofing of small bundles sloping north and south with eaves extending a few inches beyond the rim of the "gadda." The construction of this roofing requires some skill, as no ropes or strings are used to keep the sloping stalks in their position, the stalks being simply inserted into the interstices between the bundles by the weight of which they are held down tight. Stacks constructed on the above plan are perfectly water-tight and withstand the heaviest winds. Fodder required for daily consumption is always removed from the eastern end of the stack, as otherwise there is a risk of the damp getting into the interior of the stack by the beating in of the early rains from the south-west which are comparatively heavier in this taluk than the rains ushered in by the north-west monsoon.





3. *Korra and wheat straw and "pottu" of pulses.*—Korra, wheat and the grains mentioned in paragraph 1 *supra* when ripe for harvest are cut with the stalks, leaves, stems, and all dried and carted to the thrashing-floor. There they are spread on the floor and trodden down by cattle. This process releases the grain from the ears or pods as the case may be, while the stalks, leaves, pods, &c., are reduced into chips or almost into state of powder. The grain is now separated from the trodden mass by winnowing, and the remaining conglomerate, which goes by the name of "pottu," is put by for stacking, which is done as follows.

A layer of korra straw is first placed on the ground and arranged into the form of a rectangle. Over this is put a layer of "pottu" of some one kind, say bengal-gram, and the sides protected with twisted straw well pressed in. Then follows a second layer of straw and over it a layer of another kind of "pottu" and so on until all the "pottu" available stacked in so many different layers. The topmost layer is covered with ears of cholum relieved of the grain. Over all is placed a heavy "sonta" (*vide* description already given) of cholum or cumbu stalks which serves as a rain protector. On the margin is a view of a stack of "pottu."



4. This system of stacking preserves the fodder uninjured for two years.

With reference to paragraph 2 of the extract embodied in the letter of the Director of Revenue Settlement, dated 12th June 1884, No. 2480, the following information regarding the months in which the different fodders are cut and stored is submitted :—

Name of crop.	Month of harvest.	Month in which crop threshed and fodder stored.
White cholum ...	February. March.	March. April.
Yellow do. ...	October.	November.
Cumbu	Do.	Do.
Korra	Do.	Do.
Wheat	March.	April.
Bengal-gram ...	February.	March.
Horse-gram	Do.	Do.
Green-gram	December & January.	January & February.
Black-gram	February.	March.

MEMORANDUM showing the Botanical Names, as far as are known to the Director, of the Crops mentioned in the accompanying list.

English, or Native Name.	Botanical Name.
1. Paddy.	*Oryza sativa.*
2. Cholum (jonna).	*Sorghum vulgare.*
3. Cumbu (sajjalu).	*Penicillaria spicata or Panicum spicatum.*
4. Ragi.	*Eleusine corocana.*
5. Varagu.	*Panicum miliaceum.*
6. Arikalu.	*Paspalum scrobiculatum.*
7. Samai (chamalu).	*Panicum miliare.*
8. Wheat.	*Triticum vulgare (T. Sativum.)*
9. Tenai (korralu).	*Panicum Italicum.*
10. Maize (mokka-jonna).	*Zea mays.*
11. Red-gram (dholl).	*Cajanus Indicus.*
12. Green-gram.	*Phaseolus mungo.*
13. Black-gram.	*Phaseolus radiatus.*
14. Bengal-gram.	*Cicer arietinum.*
15. Anumulu.	*Lablab vulgaris.*
16. Karamani.	*Dolichos sinensis.*
17. Bobbarlu.	*Dolichos catiang.*
18. Horse-gram.	*Dolichos uniflorus.*
19. Ground-nut.	*Arachis hypogea.*
20. Hemp (janumu).	*Crotolaria juncea.*

MADRAS,
29*th April* 1885.

(Signed) J. F. PRICE,
Ag. Dir. of Rev. Sett. and Agri.

ORDER—dated 19th May 1885, No. 586, Revenue.

Miscellaneous.

Ordered to be forwarded to the Government of India, in reference to their Circular Memorandum No. 59A, dated 17th May 1884, Department of Revenue and Agriculture.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Director of Revenue Settlement and Agriculture.
,, the Board of Revenue, with copy of Circular No. 59A.

No. 586A.

Copy to the Government of India, Department of Revenue and Agriculture.

(Signed) W. WILSON,
Ag. Secretary to Government.

Exd. W. H. French.

130 Copies.

Govt. of (1885) Madras.

REVENUE.

No. 1292

Communicated to the Officers in charge of Settlement
ties, the Agricultural Reporter to Government and the
pector of Cattle Diseases.

pt. of Revenue Settlement
and Agriculture,
dras, 14th July 1885.

(By Order)

First Assistant.

the Deputy Director of Revenue Settlement Party No III
,, Special Assistant Collector, Nilgiris and Malabar.
,, Agricultural Reporter to Government.
,, Inspector of Cattle Diseases.

f.

Issued

Recd. *Encl.*

G.O., 19th May 1885,
Nos. 586, 586A.

MAY.

Hay or Fodder.

Report on the subject of stacking —, ordered to be forwarded to the Government of India.

RECEIVED
21 JUL 85

19

10TH JUNE 1885, No. 693, REVENUE.

-2513-

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—again G.O., dated 10th October 1884, No. 1113, Revenue.

ABSTRACT.—Passing orders on Board's Proceedings submitting an estimate for the survey of zemindari and inam lands in the Godávari and Kistna deltas.

READ—also letter from H. H. SHEPHARD, Esq., Government Pleader, to the Chief Secretary to Government, dated Madras, 20th October 1884, No. 378.

ABSTRACT.—Submitting his opinion that a survey may be lawfully made.

READ—also the following Proceedings of the Board of Revenue, dated 19th March 1885, No. 924 :—

Read—G.O., dated 10th October 1884, No. 1113, Revenue.

Reference on the above, dated 1st November 1884.

Referred to the Director of Revenue Settlement and Agriculture and to the Collectors of Kistna and Godávari for report.

(Signed) E. GIBSON,
Secretary.

To the Director of Revenue Settlement and Agriculture.
,, Collector of Kistna, } with copy of Government order.
,, Collector of Godávari, }

Read—the following letter from W. WILSON, Esq., Director of Revenue Settlement and Agriculture, to the Secretary to the Board of Revenue, dated Melúr, 28th October 1884, No. 3234 :—

I have the honor, in reply to Board's reference on Government Register No. 4661 of 1884, dated 1st November 1884, to inform you that the method of demarcation and survey suggested in paragraph 3 of G.O., No. 1113, dated 10th October 1884, for the determination of the wet areas, which in zemindaries are to be charged with, or exempted from, water-rate, is open to the obvious objection that the yearly measurements, which it was the purpose of the proposals made in my letter, No. 3014-64, dated 23rd November 1883, to do away with, will still be necessary, for the method suggested by Government is possible only on the supposition that the lands irrigated are constant in area and unchanging in position. This supposition, however, is not in accordance with fact, and the only method that I can think of that will obviate the necessity of yearly measurements is the one that I have already suggested in my letter of 23rd November 1883.

Read—the following letter from W. S. FOSTER, Esq., Collector of Godávari, to the Secretary to the Board of Revenue, dated Prattipád, 11th December 1884, No. 573 :—

I have the honor to furnish the report called for in Board's reference on Government Register No. 4661 of 1884.

2. The course indicated by Government in their order, No. 1113, dated 10th October 1884, would suffice if the zemindar were directly responsible to us for the payment of water-tax, as in that case we should not have anything to do with the holders of fields; but, as the law and rules at present stand, it is quite optional with the zemindar to enter into a composition for the payment of water-tax or to undertake the responsibility of collecting water-tax for us. At present there is no zemindar in this district who has now made a composition for the payment of water-tax, and though there are some who are acting as our agents, they are already showing a disposition to divest themselves of the responsibility.

3. When we receive applications for water from tenants and collect water-tax from them, block survey will not be of any use in making annual measurements of fields unnecessary, and I cannot see how we can dispense with fieldwar survey.

4. In the case of Baharazhalli and Nidadavól estates, we have nothing to do with the tenants except as regards second-crop cultivation, and the estates have besides been surveyed. The boundary stones have disappeared in many villages, but they may be fixed again, and a proper formation of blocks will be useful.

5. As regards the localization of the usual wet area, there can be no difficulty at all where the fields can be identified, but where this is not possible, the block which the zemindar selects may be accepted, subject to the approval of the Superintending Engineer.

6. In some cases the extent of the usual wet is ratably distributed over all the irrigated fields of the village, and the tenants are allowed a proportionate exemption from water-tax. This course cannot be followed if the usual wet area is localized, but the zemindar can arrange with the tenants who hold lands outside the limits of the usual wet fields by making a reduction in their rents proportionate to the amount of water-tax remitted on lands included in the usual wet block and by levying corresponding rents on the latter.

7. The usual wet extent being thus fixed, the remaining area of the village which is commanded by the anicut works should, I think, be surveyed fieldwar.

Read—the following letter from W. A. HAPPELL, Esq., Collector of Kistna, to the Secretary to the Board of Revenue, dated Masulipatam, 7th February 1885, No. 294 :—

I have the honor to reply to the Board's reference, No. 4661, dated 1st November 1884, communicating G.O., No. 1113, dated 10th October, on the subject of localizing and demarcating the *mamul wet* areas in the zemindari and inam villages in the delta.

2. The Government consider that the object in view will be sufficiently gained if the area under irrigation in each zemindari village be demarcated and surveyed in convenient blocks, and if, from this, the extent set apart as *mamul wet* be deducted, the remainder being liable to water-rate payable by the zemindar.

The Delta Tahsildars, who have been consulted, are unanimous that the *mamul wet* areas should, irrespectively of other irrigation, be definitely settled, the larger tracts being demarcated and surveyed in blocks of 50 or 100 acres each, and the smaller and scattered ones each as a separate holding.

I agree in this view, and, judging from the tirwajasti reports, have reason to believe that Government are, year after year, losing a large amount of water-tax to which they are justly entitled, *e.g.*, in the Gúdúr Pargana belonging to the Vellur zemindar, the Government, in their order, No. 729, dated 22nd April 1871, sanctioned a *mamul wet extent* of Acres 8,604·86. The zemindar's entire wet irrigation in the Pargana in any one year does not exceed this limit, but he is continually changing the land under irrigation and so evading payment. Other zemindars are doing the same. This can only be checked by the mamul wet areas being, once for all, locally defined and surveyed.

3. On the same principle might the tax-paying areas and the adjacent areas commanded by the works be demarcated. The Gudiváda Tahsildar, however, advocates, as the safest and, in the long run, as the most economical policy, that irrigated lands should in all cases be demarcated field by field. This would doubtless facilitate applications for, and relinquishment of, channel water, and place zemindari lands on the same footing as neighbouring Government putta lands. As one advantage of the contemplated demarcation, the necessity for the annual measurement of irrigated land would cease. But when portions of *blocks* are relinquished or have otherwise to be dealt with, measurements would still have to be made.

Reference on the above, dated 27th February 1885.

The Board resolve to refer the foregoing letters to the Chief Engineer for Irrigation, with the request that he will favor them with his opinion.

2. The Board think that the suggestion made at paragraph 3 of G.O., dated 10th October 1884, No. 1113, if adopted, would not lead to satisfactory results, and that its effect would be, as given in the case adduced by the Collector of Kistna, that loss of revenue would be entailed. The only satisfactory arrangement would seem to be that proposed by the Director of Settlement and Agriculture in his letter printed in Board's Proceedings,* dated 16th January 1884, No. 125, namely, a detailed survey of the zemindari villages which are irrigated from Government works, supplemented by a continuous and compulsory village record of irrigation and a system of inspection as in Government villages.

* Copy enclosed.

(Signed) E. GIBSON,
Secretary.

To the Chief Engineer for Irrigation, with papers in original
to be returned, and copy of Board's Proceedings,
No. 125, dated 16th January 1884.

Read—the following letter from Colonel J. O. HASTED, R.E., Chief Engineer for Irrigation, to the Secretary to the Board of Revenue, dated Chepâk, 6th March 1885, No. 69-M.:—

In reply to the reference of the Board of Revenue, dated 27th February 1885, regarding the demarcation of the extent of irrigation in zemindari and inam lands entitled to water-supply free of charge, and that liable to pay water-rate in the Godávari and Kistna deltas, I have the honor to state that I agree with the Director of Revenue Settlement and Agriculture in considering that a scientific survey, in detail, of all zemindari and inam lands irrigated by Government irrigation works, should be carried out.

Resolution—dated 19th March 1885, No. 924.

Submitted to Government with reference to G.O., dated 10th October 1884, No. 1113.

2. The Board concur with the Chief Engineer and the Director of Settlement and Agriculture in the opinion that nothing short of a scientific survey in detail will meet the requirements of the case.

(True Copies and Extract.)

(Signed) E. GIBSON,
Secretary.

To the Secretary to Government, Revenue Department.
Copy to the Director of Revenue Settlement and Agriculture.
„ „ Chief Engineer for Irrigation.
„ „ Collector of Godávari.
„ „ Collector of Kistna.

ORDER—dated 10th June 1885, No. 693, Revenue.

Land Revenue, No. 88.

After careful consideration His Excellency the Governor in Council is of opinion that the cost of the survey should be borne by Government.

2. The question which remains for determination is in what detail the demarcation and survey should be carried out. The main object is to localize the areas entitled to free irrigation as "mamul wet," and these may be in scattered fields of moderate size or be arranged in continuous blocks of considerable area. In either case each block of the mamul wet area that can be "ring-fenced" should be separately surveyed and separately numbered. When the areas have been thus localized and their localization is accompanied, as it must be, by a continuous record and an organized system of inspection, there will be no difficulty in determining the extent of land irrigated outside the mamul wet blocks and liable to the water-rate. Of course the outside areas will be demarcated and surveyed fieldwar.

3. The Government consider that the experiment of conducting a survey on this limited plan should be made first in two selected villages, and when the result is communicated, they will be in a position to issue orders as to how the survey shall be conducted throughout the deltas. The Collector of Godávari will accordingly select two villages for the purpose and report what they are; the Superintendent of Revenue Survey will then arrange for the experimental survey and submit a report on the result with a map for each village.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Board of Revenue.
„ Superintendent, Revenue Survey, with copy of G.O., No. 1113 of 1884.
„ Director of Revenue Settlement and Agriculture.
„ Public Works Department, Irrigation Branch.
„ Government Pleader.

Exd. J. Henricus.

120 Copies.

No. 2056

municated to the Officers in charge of Settlement Parties.

of Revenue Settlement
d Agriculture,
16th July 1885.

(By Order)

First Assistant.

To

The Dy: Director of Rev: Sett
Party No III

Govt. of {1885} Madra

REVENUE.

275

Issued

Recd. *Encl*

G.O., 10th June 1885, No. 693.

JUNE.

Survey of Zemindari and Inam Lands.

Deciding that the cost of — in the Godávari and Kistna deltas, for the purpose of the water-rate, should be borne by Government, and describing the plan on which the demarcation and survey should be carried out.

RECEIVED

11th July 1885, No. 808, Revenue.

JUL 85

Registered

276-

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following letter from Colonel H. T. ROGERS, R.E., Superintendent, Madras Survey, to the Secretary to Government, Revenue Department, dated Madras, 13th April 1885, No. 70-G. :—

With reference to paragraph 3 of G.O., dated 23rd March 1885, No. 351, I think that there can be no doubt that it will be a most judicious measure to defer the survey of the Malabar district excepting Wynaad for the present, and so permit the Survey department to concentrate its efforts upon the rapid completion of the work in those districts where it has already been too long in progress.

In survey work especially the principle of concentration should be carried out; for quick survey work is always easier, better and cheaper than slow work.

2. If No. V party, after the completion of the Wynaad survey, is set free for other work by the postponement of the Malabar survey, I would most strongly advocate its employment on the Bellary-Anantapur survey, which was commenced fourteen years ago, and of which at the commencement of the last official year there still remained 8,514 square miles of revenue survey to be completed. It will be very much better to employ it so than to send it to Tanjore; for No. IV party will be available to give assistance there not very long after No. V party will be set free, and from its constitution it is far better adapted for the intricate revenue survey of Tanjore than No. V party.

Read—the following Proceedings of the Board of Revenue, dated 5th June 1885, No. 1636 :—

Read—the following letter from W. LOGAN, Esq., Collector of Malabar, to the Secretary to the Board of Revenue, dated Calicut, 13th May 1885, No. 2030 :—

Referring to the last sentence in paragraph 3 of G.O., Revenue Department, No. 351, dated 23rd March 1885, I have the honor to submit that this district has special claims to consideration for early survey and settlement.

2. The district is, and has been these last twelve years, in a disturbed state. I have already in my Land Tenures Report expressed a decided opinion that the agrarian question is at the root of the discontent which exists. The settled cultivators or ryots are liable to constant ejectments from their holdings, and rates of rent formerly low by force of custom are now rapidly on the rise by force of contract.

3. Some decision ought soon to be come to in regard to the policy of Government in this matter, and whatever that policy may be, it is obvious that we shall require a detailed survey to give us the materials essential for satisfactorily disposing of the questions likely to arise.

4. Other districts with no such questions requiring an early decision might well wait until Malabar is fully surveyed. The two survey parties ought, I think, to be thrown into this district instead of into Tanjore, where things are in a quiescent state.

Resolution—dated 5th June 1885, No. 1636.

Submitted to Government.

2. Mr. Logan bases the special claims of Malabar to early survey and settlement on the ground of long existing agrarian discontent arising from the system of land tenures in force in the district, but as the Board have never been called on by Government for an expression of their opinion on the views of Mr. Logan, as put forward in his report on Malabar land tenures, they do not feel at liberty to give an opinion on the matter now. They consider, however, that on other grounds Malabar has preferable claims, if not to Tanjore, certainly to Bellary and Anantapur, to be surveyed, and that if the Government consider the survey of the first-named district politically expedient, it would be better to throw three survey parties into it and get the work finished in five years, than to run any risks by deferring the work till the Tanjore survey is over.

(A true Copy and Extract.)

(Signed) E. GIBSON,
Secretary.

To the Secretary to Government, Revenue Department.

Copy to the Collector of Malabar.
„ „ Superintendent of Madras Survey.
„ „ Director of Revenue Settlement and Agriculture.

ORDER—dated 11th July 1885, No. 808, Revenue.

Miscellaneous.

The Government observe that the survey of Bellary-Anantapur commenced some fourteen years ago and is still a long way from completion. The No. I settlement party, now working in the North Arcot district, will, it is understood, be soon free to commence operations elsewhere, and as it is a Telugu party, it may, with advantage, be moved into Bellary, some taluks of which have been surveyed and are ready for settlement. But if the survey party there be not strengthened, the Settlement department will ere long overtake it and settlement operations will come to a standstill. The Government therefore accept the recommendation of the Superintendent, Revenue Survey, that No. V survey party shall, on completion of its work in the Wynaad, proceed to Bellary-Anantapur and accelerate the survey operations in those districts.

2. The Government further consider it inexpedient for the present to take up any new district for survey, and resolve therefore to direct the postponement of the survey of the Malabar district.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Board of Revenue.
„ Superintendent, Revenue Survey.
„ Director of Revenue Settlement and Agriculture.

Exd. J. Henricus.

80 Copies.

Govt. of (1885) Madras.

REVENUE.

277

Issued

Recd. *Encl.*

G.O., 11th July 1885, No. 808.

JULY.

Survey of Malabar.

Directing the postponement of the — and the employment of No. V survey party on the Bellary-Anantapur survey.

No 2202

mmunicated to the Officers in charge of Settlement Parties.

of Revenue Settlement
and Agriculture,
as, 27 *July* 1885.

(By Order)

First Assistant,

To

The Deputy Director of

Rev: Settt. Party No III

RECEIVED
10 AUG 85

Reg No 21

10th July 1885, No. 807, Revenue.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following letter from M. A. LAWSON, Esq., Director of Government Cinchona Plantations, Parks and Gardens, Nīlgiris, to the Secretary to Government, Revenue Department, dated Ootacamund, 20th March 1885, No. 51 :—

With reference to G.O., No. 200, dated the 15th January 1885, Financial, I have the honor to state, with reference to paragraph 3 of G.O., No. 2914, dated the 15th December 1884, that the prevention of the waste of stationery in this department has been under my consideration for some time, the result of which has been that I have now in stock three large boxes full of stationery, sufficient in itself to last me for the next year without the aid of a further supply, except in the herbarium department, which, from its peculiar nature, will require a special supply.

2. With reference to the suggestions made in paragraph 2 of the Superintendent of Stationery's letter, No. 1115, dated the 3rd December 1884, I have the honor to state that the proposal to allot to each officer a fixed allowance for the purchase of stationery would, if adopted, be attended with a want of uniformity in the stationery used by officers, as the same kind of paper would not be procurable everywhere. With the exception of this draw-back the proposal appears to me to be worth adopting.

Read—the following letter from Colonel H. T. ROGERS, R.E., Superintendent, Madras Survey, to the Secretary to Government, Revenue Department, dated Madras, 26th March 1885, No. 63-G :—

With reference to paragraph 3 of G.O.,* No. 2914, dated the 15th December 1884, Financial Department, I have the honor to state that, in the Revenue Survey Department, a large amount of the stationery used is not procurable in the local market at a reasonable cost; moreover, the requirements of each year vary according to circumstances. Consequently, the proposal of the Superintendent of Stationery to allot a fixed allowance to each office would be impracticable in this department.

* Communicated in Revenue Department No. 200 of 15th January 1885.

2. I am also of opinion that the deputation of an officer to suggest economies is hardly necessary as the expenditure of stationery is carefully watched.

Read—the following letter from W. WILSON, Esq., Director of Revenue Settlement and Agriculture, to the Secretary to Government, Revenue Department, dated Madras, 31st March 1885, No. 940-C :—

I have the honor, in reference to G.O., No. 200, dated 15th January 1885, to inform you that the proposal of the Superintendent of Stationery, to give a fixed money allowance to heads of departments for the supply of stationery to their offices, is, in my opinion, opposed to all sound principles of administration, being in nature the same as the old Colonel's allowances for the clothing and equipment of troops. No public officer should, in my opinion, have any personal pecuniary interest in the matter of supplies required for the public service.

2. The only way in which economy can or should, in my opinion, be enforced is by insisting on heads of departments themselves vigilantly watching the expenditure of stationery and thus checking any improper tendency to growth. This may be done by insisting on the fullest explanation in the yearly indents of all increases over, say, 5 per cent. on the average expenditure for three years preceding.

Read—the following proceedings of the Board of Revenue, dated 5th June 1885, No. 1629:—

Read—G.O., dated 15th December 1884, No. 2914, Financial.

Read—the following G.O., dated 15th January 1885, Mis. No. 200, Revenue:—

Abstract.—Communicating, for report on certain paragraphs, Government order, Financial, reviewing budget estimates of the Stationery Department for 1885-86.

Reference on the above, dated 27th January 1885.

The Superintendent of Stationery is requested to furnish a statement showing the quantity and value of stationery issued in each year since 1872-73 to the Board's office and to each of the districts separately.

(Signed) C. F. MacCARTIE,
Acting Sub-Secretary.

To the Superintendent of Stationery.

Read—the following letter from M.R.Ry. P. CHENTSAL RAO, PANTULU GARU, Superintendent of Stationery, to the Secretary to the Board of Revenue, dated Madras, 20th February 1885, No. 1415:—

With reference to the Board's proceedings on Government register Nos. 5689 and 263 * of 1884, I have the honor to submit a statement showing the stationery issued to the Board of Revenue from 1872-73 to 1883-84. With my limited establishment it will not be possible for me to prepare a similar statement for each Collectorate separately within a reasonable time. If the statement is urgently required, I beg that the Board will authorize me to employ two clerks temporarily for two months.

* Dated 27th January 1885.

Enclosure.—Statement.

Resolution—dated 5th June 1885, No. 1629.

In the Government order read above, the Board were requested to report on certain suggestions made by the Superintendent of Stationery for reducing the expenditure of stationery, which has considerably increased within the past ten years. Before replying to this order, the Board requested the Superintendent to furnish them with a statement showing the quantity and value of stationery issued in each year since 1872-73 to the Board's office and to each of the districts separately. The accompanying statement shows the stationery issued to the Board's office since 1872-73. The Superintendent states that a similar statement for each Collectorate cannot be prepared within a reasonable time without additional establishments.

2. In the absence of details for the districts and for the presidency offices under their control, the Board are not in a position satisfactorily to account for the increase in value of stationery, from Rs. 1,00,069 in 1872-73 to Rs. 1,84,526 in 1883-84, referred to in paragraph 1 of the Superintendent's letter, of the 3rd December 1884, No. 1115. So far as their own office is concerned, the Board have no hesitation in stating that the

increase is due chiefly to increase in correspondence and partly also to the system introduced since 1881 of using paper of particular size in official correspondence and of folding it lengthwise instead of transversely. The advantages of this method in neatness and time-saving were fully considered at the time, and need not be recapitulated. The Board think, however, that in the case of unimportant papers, which are not meant for permanent record, half a sheet of paper or less might be used without inconvenience. For reminders, &c., post-cards might be used.

3. Again, Board's proceedings in the monthly volumes were formerly printed consecutively and paged; but as this entailed a very large expenditure under printing charges in the way of imposing a second time matter already printed, it was arranged that additional spare copies of the Board's proceedings should be struck off for the volumes, and in consequence of this arrangement there has been some increase in the quantity of paper used. But the increased cost of stationery is much less than the value of the labor saved under printing, and there is also this additional advantage that the monthly volumes are now published much earlier than before.

4. The Board do not think that any advantage would be derived from the adoption of the Superintendent's proposal to give a fixed allowance to each office for purchase of stationery. If the allowance once made should prove to be insufficient, a further grant must be made. At present, the quantity of stationery issued is fixed with reference to the actual expenditure of previous years, and explanations are always called for if an increased supply is required. A proposal to give money allowance to karnams to supply themselves with paper was put forward in 1863, but was rejected by the Board and Government—*vide* Board's proceedings, 6th August 1863, No. 4895, and 5th April 1864, No. 2004.

5. As regards the stationery supplied to villages, the Board are unable to agree with the Superintendent that because the pay of the village officers is debited to the Village Service Fund, the stationery required by them should also be charged against that fund. The stationery is required chiefly for keeping the accounts necessary for the settlement and collection of the revenues due to Government, and cannot fairly be charged to the Village Service Fund.

(A true Copy and Extract.)

(Signed) E. GIBSON,
Secretary.

To the Secretary to Government, Revenue Department,
with copy of statement.

Copy to the Superintendent of Stationery.

ORDER—dated 10th July 1885, No. 807, Revenue.

Miscellaneous.

The foregoing papers are the replies to G.O. dated 15th January 1885, Mis. No. 200, calling upon heads of departments to report on certain suggestions made by the Superintendent of Stationery for reducing the expenditure of stationery. The suggestions were—

(1) to allot a fixed allowance to each office for the purchase of stationery and to make the head of the office personally responsible for any excess expenditure;

(2) to debit to the Village Service Fund the cost of the stationery now supplied free to village karnams.

All the officers consulted are unanimous in thinking that the proposal to give a fixed money allowance is undesirable. The Board consider that no advantage would be gained by the adoption of the proposal, as at present the quantity of stationery issued is fixed with reference to the actual expenditure of previous years, and explanations are always called for when an increased supply is required, and point out that a similar proposal, limited in its application to karnams, was once before put forward and rejected by Government (G.O., 23rd November 1863, No. 2106). The Director of Revenue Settlement and Agriculture is of opinion that the proposal is opposed to all sound principles of administration and thinks that a public officer should not be allowed to have any pecuniary interest in the matter of supplies required for the public service. The only way in which economy can or should, in his opinion, be enforced is by insisting on full explanation in the annual indents of all increases over 5 per cent. on the average expenditure for three previous years. This, he considers, would induce heads of departments to vigilantly watch the expenditure of stationery. The Superintendent of Revenue Survey thinks the proposal unsuited to his department, the requirements of which vary every year and cannot be met from the local market at a reasonable cost. In the opinion of the Director of Government Cinchona Plantations, Parks and Gardens, the only drawback in the proposal is that its adoption would lead to a want of uniformity in the stationery used by different officers as the same kind of paper would not be procurable everywhere.

2. The Government in this department consider that the system of fixed allowances is objectionable for the reasons assigned by the Director of Revenue Settlement and Agriculture, and that the only proper remedy for preventing waste of stationery is that suggested by him. The information which the Superintendent of Stationery has been called upon to furnish in paragraph 4 of G.O., 15th December 1884, No. 2914, Financial Department, would enable Government to find out in what offices there has been unnecessary increase in the cost of stationery supplied, and enquiries instituted as to the cause of the increase might lead to the determination of the proper remedy to prevent such increase for the future. Attention might be drawn to one way in which stationery is very unnecessarily wasted, viz., in the quality and quantity of paper used for covers. Tiny slips of flimsy paper are frequently found to be the only enclosures in large covers made of the stiffest and costliest covering material.

3. In regard to the proposal to debit to the Village Service Fund the cost of the stationery now supplied free of charge to village karnams, the Government do not agree with the Board in the view they have taken. If the cost of village chavadies (*vide* G.Os., No. 917, dated 28th April 1879, and No. 576, dated 5th April 1881) can fairly be debited to the Village Service Fund, it does not appear why the cost of stationery supplied to such officers cannot be charged to the same fund with equal fairness. The question may be allowed to stand over, however, for further consideration.

(True Extract.)

(Signed) W. WILSON,
Ag. Secretary to Government.

To the Financial Department.
,, the Board of Revenue.
,, the Director of Revenue Settlement and Agriculture.
,, the Superintendent of Revenue Survey.
,, the Inam Commissioner.
,, the Director of Government Cinchona Plantations, Parks and Gardens, Nilgiris.

Exd. E. Fernandez.

100 Copies.

Govt. of {1885} Madras

REVENUE.

280

2

No. 2299

Communicated to the Officers in charge of Settlement Parties, the Agricultural Reporter to Government and the Inspector of Cattle Diseases.

Dept. of Revenue Settlement
and Agriculture,
Madras, 7 *August* 1885.

(By Order)

First Assistant.

To the Deputy Director of Revenue Settlement Party No III
" " Special Assistant Collector, Nilgiris and Malabar.
" " Agricultural Reporter to Government.
" " Inspector of Cattle Diseases.

Issued

Recd. *Enc*

G.O., 10th July 1885, No. 807.

JULY.

Stationery.

Orders passed on proposals for reducing expenditure of —.

																	16					57
																	12	33				45
8. Trichinopoly	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Tinnevelly	..	..	..	..	..	..	..	..	..	..	..	Details not known.										
10. Salem	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	112	23	23	..	..	158

Districts.	Talayaries and Vetties.										Nirganties.							
	Paid at									Total.	Paid at							Total.
	Rs. 6.	Rs. 5.	Rs. 4.	Rs. 3½.	Rs. 3.	Rs. 2½.	Rs. 2.	Rs. 1½.	Re. 1.		Rs. 6.	Rs. 5.	Rs. 4.	Rs. 3.	Rs. 2½.	Rs. 2.	Re. 1.	
	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
1. Godávari										Details not known.								
2. Kistna	..	..	504	272	1,554	312	2,519	..	..	5,161	..	..	..	88	..	224	..	312
3. Nellore	..	..	331	112	760	215	1,329	..	..	2,747	..	..	..	98	16	79	..	193
4. Cuddapah	..	..	422	96	959	285	1,014	..	..	2,776	..	..	..	116	34	92	..	242
5. Kurnool										Details not known.								
6. Chingleput	..	..	48	24	120	128	559	..	2,080	2,959	..	..	..	8	..	6	..	14
7. South Arcot	..	..	..	..	84	42	917	..	..	1,043	..	..	..	12	..	20	..	32
8. Trichinopoly	..	..	..	..	1,826	..	..	..	..	1,826	..	..	..	..	..	..	..	
9. Tinnevelly										Details not known.								
10. Salem	..	..	..	..	474	72	948	180	2,944	4,618	..	..	..	..	..	..	..	

281

(A true Copy and Extract.)

(Signed) E. GIBSON,
Acting Secretary.

To the Secretary to Government, Revenue Department.

NOTE.

The Second Member is unable to concur in the
and has recorded his opinion that it would be a serious
authority in a village instead of the system under which
Government with one responsible head, having the begi
magisterial authority centred in him, and styled in law
seems to have been held by Sir Thomas Munro and
dated 29th June 1876, No. 865, which appears to the Se
He further thinks it open to question whether looking
it would be legal to sever the functions without a fresh
the case of villages which have outgrown the power of o
by cutting the village rather than the system in two, an
progress of survey and settlement.

ORDER—dated 3rd December 1885, No. 1341, Reve

Land Revenue, No. 142.

Th
contribut
be remit
further consideration and report in the light of the

2. The emoluments of village officers prior to
schemes were derived from some or all of the follow

(1) Fees deducted from the gross produce
Government and the ryot.
(2) Fees sanctioned by custom superadded fr
(3) Service inam lands.

3. It is clear that in regard to the fees of
contribute an equivalent amount to the ryot's
regard to the second no such liability accrues. T
left to the ryots; but in particular cases owing to i
in payment or in connection with schemes of reor
establishments, fees of both classes were resume
which were added to, and incorporated in, the Go
being assigned from the gross land-revenue coll
village servants by Government officers. Instanc
class are the commuted fees in North and South A
Tanjore. Instances of resumption of fees of the s
mon. Such are the "katlay shelavoo" in Trichi
Tanjore, and apparently (though the contrary ha
for "kaval fees" in Nellore, which has led to the
ernment of India.

4. The payments now made from the land rev
lents of resumed inams and manyams, *e.g.*, in Sa
Except in Kurnool where the fee cess was includ
and in the Masulipatam portion of the Kistna whe
so high that they were declared to include the ce
payable was taken in the revised settlements. Th
after the introduction of the revised rates was auth
impliedly merged in the revised rates (G.O., 30
assumed the character of a fixed grant from ge
Their existence has been several times reported t
31st May 1865, Nos. 1159 and 1160, and 12th Ju

5. When the reorganization of village estab
was intended to abolish all fees, and grant further e
but the fees being found to be of too great impor
main or major fees, *i.e.*, those paid to servants w

[illegible]

money payments, the minor fees, or those payable to arti-
Where fees had fallen into disuse, they were not to be
niform cess, which was subsequently adopted, was first
ector of Kurnool, and was at once accepted on all sides.

he same time to ascertain the amount of the deductions
ved in the existing rates, and the result is given in the
Board's letter to Government, dated 1st February 1862.
s gathered (1) from the earliest reports on record, (2)
in selected villages in 1818, and (3) from contemporary
ductions obtaining in the settlements current in 1861.
very discrepant, and the deductions include, besides main
raph), allowances for cultivation charges (chiefly for reap-
d Brahmins, charity to the poor, &c. The obligation of
payment of a share of such charges as well as of those
; but it may be held to be amply discharged by the
in the new settlements for cultivation expenses, vicissi-
he same time, in connection with Mr. Pelly's inquiries,
in money (how commuted does not clearly appear, but
ctually paid in fees of all kinds, both in lieu of deductions
e ryots' share, and all the figures available bearing on the
the following statement. It is to be noted that, supposing
per cent. of the crop, the Board's percentages on the gross
d to give the equivalent percentage on the revenue :—

n Board's Précis. Gross Produce.		Fees paid at the Date of Mr. Pelly's Reports.	Percentage on the then Revenue.	982 Remarks.
2	3 Major and Minor Fees.			
..	..	RS. 15,151	2·1	Fees already commuted and paid in cash from the treasury.
10·0 (a)	..	2,423	·9	Fees quite voluntary.
..	2·118 (i)	20,706	·6	Godávari district, voluntary.
48 to 6 (d) 12·5 (a)	3·748 3·073	84,736	3·5	Kistna district ; percentage on old beriz.
6·5 (d)	6·5	64,969	4·1	Major fees alone voluntary.
No report.	..	1,17,921	3	Voluntary. Commutation at current price. Rates according to Rewazputti. From ryots' share.
	..	2,68,226	14	Voluntary. Net do. do.
	..	20,628	1·1	Revenue servants only. No fees in Kurnool proper.
20·0 (a)	7·451	90,643	8·2	Includes shroffs and nirgantis' fees. Commuted.
7·4 (d)	5·47	1,59,033	8·1	Fees already commuted and included in the revenue.
..	2·487 (i)	48,042	1·2	Monegars' and Karnams' fees resumed in 1807.
8·38	3·454	99,148	..	All commuted and included in the revenue.
12 (a)	..	1,18,666	8·0	Of this 74,426 commuted and resumed.
17 (a)	0·8	3,210	·25	
..	9·003	1,12,422	4·56	Of this Rs. 16,843 by ryots alone. Including kavalgars' fees.
No report.	..	..	..	
	..	..	..	
	..	..	..	
	10 (h)	..	..	
..	..	12,26,024	..	

Entirely from ryots' share. Includes major and minor fees. (c) Brahmins
or fees. (e) From ryots' share only. (f) Includes poor. (g) In manyam
Major fees only.

Board's column 3 are the most definite and satisfactory, as
of the deductions from gross produce ; and when it is borne

in mind that they include artisan's and village police
service, it will be clear that, even when doubled to
or Government share, the $6\frac{1}{4}$ per cent. was in exces
possibly be taken to represent half of them. There
of 18 districts. Turning to the figures of fees actual
which include police fees and fees paid exclusively
cent. will be still more clearly seen to be a high ma
also shows that it was intended to include the total
only th
first, as
intende
only the

See statement of objects and reasons, page 312, Mr. Pelly's volume.

ordered to prepare a draft Act for this purpose. The
20th November 1860, No. 5395, but Government in th
1861, No. 868,) took an entirely new departure. T
on the ground that it did not provide for imposing fe
they said it would be impossible to ascertain what exis
Act was to put the impost on a broad and legal basis.
land revenue, was not to be regarded as an addition
fixed proportion to it, nor was it to be considered as a
so in the vast majority of cases. The $6\frac{1}{4}$ per cent.
revenue fees. The Act was eventually passed on
discussion as to the $6\frac{1}{4}$ per cent. maximum, and a
(Inspector-General of Police) to get it raised to 10 per
by the Board and Government as representing the ut
equivalent for the total of existing fees.

8. It will be seen from what has been said above
the land revenue was intended to represent the wh
servants and not half of them ; (2) that it was mea
well as of the first class specified in paragraph 2 *sup*
it was far in excess of the fees of the first class. It
dence on the subject that the fees taken out of the g
part, only to wet lands in which the sharing syste
which paid in the greater part of the country fix
levied on the revenue of all lands. It is clear there
ryots pay $6\frac{1}{4}$ per cent. on the land revenue represent
tions from the gross produce, Government should pa
share must fall to the ground. The measure of the
major fees were included in the deductions from the g
ments. On this being ascertained, a claim may be
such amount. But it is evident that in any case the
benefited, for the ryot must be relieved from paying
be due from Government inasmuch as the $6\frac{1}{4}$ per
represents the *total* of the fees previously payable,

9. The Board will institute inquiries with a vie
settled districts, what portion of the $6\frac{1}{4}$ per cent.
gross produce. As regards districts yet to be settl
made by the Settlement Department, and the result
settlement. The Board are also requested to expla
the several contributions and beriz deductions now

(True Extract.)

To the Board of Revenue.
,, the Director of Revenue Settlement and Agricultu

Exd. W. H. French.

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